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PUERPERAL SEPTICEMIA.*

BY ADAM H. WRIGHT, B.A., M.D., M.R.C.S., ENG.,

Professor of Obstetrics, University of Toronto.

THE Burnside Lying-in Hospital of Toronto has been fortunate in having a good record in recent years. For two years and three months, up to March, 1893, there had been no case with serious symptoms pointing to septicemia. It was very seldom that any case went in the slightest degree "queer." Suppurative mastitis had not been seen for five years. For several years before 1891, we had been endeavoring to use the modern antiseptic and aseptic methods, with only fairly good success. The patients in uncomplicated labor are attended by the house physicians, whose terms of office are only about six weeks. As a matter of course, all do not learn equally well their aseptic and antiseptic lessons; at least, such has been our experience in this institution. Notwithstanding our precautions, septicemia occasionally appeared; but, on the whole, our mortality rates had been much reduced. We were not satisfied, however.

* Read before the Toronto Medical Society.

Consequently, in January, 1891, a complete set of rules was formulated for the guidance of physicians, students, and nurses, founded on the methods of Leopold, and certain British and American obstetricians. The most important of these rules is one which compels each physician, nurse, and student to spend not less than eight minutes in cleansing his hands, according to a definitely described plan, before touching the patient. Two minute glasses (one five, the other three) are used to indicate the time to be thus employed. They are placed in charge of the matron or head nurse, who is made responsible for the proper observance of the rule. Without any further reference to our methods at this stage, I may say that the results under our new regulations were very gratifying. During 1891 and 1892 the record was almost without a blemish. A similar condition of things existed early this year; but, suddenly, a calamity fell upon us; the old enemy appeared when least expected, and carried off a mother and babe.

I am indebted to Professor Primrose for assistance in looking after the patients, and for the following history, which he took from the hospital records, and to Professor John Caven for his careful investigations, and the valuable report on the *post-mortem* conditions.

M. M., æt. 17, single.

Admitted to the Burnside Lying-in Hospital, Feb. 6th, 1893, apparently a strong, healthy girl, well advanced in her first pregnancy. Labor pains came on at midnight, March 27th, and a well-developed male child was born at 10.30 the following morning, March 28th. There was nothing unusual about the birth, and every precaution was taken to keep the parts aseptic.

The girl came from the country, and it was difficult to obtain her previous history. Since her death it has been found that she had led the life of a prostitute for some years.

There was some slight delay in the third stage, but finally the placenta came away with the membranes intact, without any active interference beyond the mere insertion of the finger of the attendant house physician into the vagina. A slight tear of the perineum required stitching, and this was done with silkworm gut which had been previously soaked for half an hour in 1-20 carbolic acid lotion. After confinement the patient seemed well, with no rise of pulse or temperature; the uterus was well contracted.

On the evening of March 30th (sixty hours after confinement) her pulse was 92, and the following morning (March 31st) the temperature recorded was 102.6°. Sulphate of magnesia was administered until the bowels moved freely. On April 1st, 15 grs. of sulphate of quinine were administered, and an intra-uterine douche consisting of a 1-10,000 bichloride solution, followed by plain hot water. The uterus was small and

low down, and the discharges somewhat scanty and odorless. The patient continued to nurse her baby, and, having abundance of milk, also nursed some of the other babies in the ward. The baby began to look pale and sick on April 1st (*i.e.*, when it was four days old), and on the night of April 3rd it was very restless, and seemed to be in pain. After that date it was not nursed again by its mother. Two days subsequently (April 5th) the baby's right arm was found to be swollen and red; the next day its left leg was attacked in like manner; it died on Saturday, April 8th.

The stitches were removed from the perineal tear on April 4th, and there is a note to the effect that "one stitch hole had a little pus in it, but the general result was good." The patient complained of pain in her right arm and leg on April 6th, the arm swelled considerably, but there was no perceptible swelling in the leg. On April 9th (twelve days after confinement), the following note was made of the patient's condition: The patient was anemic, as evidenced by the blanched appearance of the lips and conjunctivæ; she was breathing very rapidly. The right forearm, on the dorsal aspect, presented a red and swollen appearance, particularly well marked over the ulna, and extending along the greater part of the bone; the greatest amount of swelling was at a point three inches below the elbow; there was a slight degree of redness, and the affected part was exquisitely tender. The condition resembled very much that found in acute periostitis. The left arm was also swollen; the affected area, however, was more limited, the greatest amount of swelling being at a point two inches above the elbow joint over the outer and back part of the arm; the part was very tender to the touch.

The calf of the right leg appeared to be swollen, but there was no redness. On palpation, however, it was found to be very tender, and there appeared to be an indistinct, brawny hardness, somewhat deeply placed; the limitation of this was not readily defined. There was no distension of the belly, and no abdominal tenderness. The patient had no headache, she took her nourishment well, and there had been no history of rigors during her illness. Her pulse, at the time of examination, was 120, respiration 40, and temperature 102.2°. Free incisions were made in the right forearm and left arm; in both limbs the knife was carried down to the bone. The subcutaneous tissue of the right forearm presented a very peculiar appearance; the tissue in question was gray in color, and of a clear, transparent jelly-like appearance; there was no pus, and no collection of fluid of any kind. It was thought that suppuration would sooner or later supervene in the affected tissues, and consequently provision was made for free drainage. The left arm was dressed in a similar manner; the condition of the part resembled that found in the right forearm. In

both limbs the affected area was apparently limited to the subcutaneous tissue. Operative measures did not seem to be indicated in the treatment of the calf of the right leg.

The general condition of the patient did not appear to be affected by the operation. Three days subsequently there was abdominal pain and slight distension; she also complained of some pain along the spine. The discharge from the wounds was now purulent.

Cover-glass preparations were made from discharge obtained from the bottom of the wounds. On examination of these, numerous diplococci were found, and several groups of streptococci; there were no bacilli. From some stabs made in glycerine jelly tubes, there were subsequently found pure cultures of a streptococcus. On April 18th a swelling on the left forearm was opened; this was found to contain pus. The opening was made with antiseptic precautions, and from a culture obtained from this pus, in glycerine jelly and agar-agar, a streptococcus was found similar to that growing in the former cultures.

The patient's condition gradually became worse. The striking features developed in her case during the three weeks of her illness, in addition to the local conditions already described, were a persistent high temperature, ranging from 101° to 105.6° ; the remarkably rapid respirations; during the last week these were recorded very carefully, the lowest being 36 per minute, and the day before her death 74. The respirations were notably more rapid during sleep. The patient was restless and very nervous; her lips would quiver, and it seemed as if she were going to have a rigor, but this never occurred. The pulse rate was never very rapid, averaging about 120; the strength and regularity of the pulse were well maintained. In the latter part of her illness the patient was delirious at times; nourishment was taken freely and well until three days before her death. During the last week the house surgeon opened a small superficial abscess in the right heel, and another in the chin. The pain in the calf of the right leg disappeared altogether, and the trouble there had apparently disappeared. The amount of pus discharged from the wounds in the arm was never very great. In addition to local measures, the patient was treated by free stimulation; she took as much as $\bar{3}$ vi. of whiskey in twelve hours. For a time quinine was administered, but without effect; salol was substituted, but it disturbed her digestion, and was discontinued.

She died on April 21st, twenty-four days after confinement.

Report of post-mortem examination, by Professor Caven. The examination was made seven hours after death. Inspection: The body was very well nourished, but rigor mortis not well marked. Section: No pleuritic adhesions were found, nor fluid in the pleuræ. The lungs were pale and spotted over with areas of collapse; edema and hypostasis were fairly

marked in lower lobes. The pericardium was healthy. The heart substance was markedly pale, showing distinct evidence of cloudy swelling; the cavities of both sides contained ante- and post-mortem clots. The spleen was large (14 ounces), pale, and diffuent, the pulp washing out very readily, and leaving the trabecular frame. The liver was greatly enlarged, and showed marked cloudy swelling; the microscope shows also interstitial hepatitis, recent. The kidneys showed cloudy swelling. The pancreas was unusually firm. A small focus of suppuration was noticed on cutting through the left broad ligament; on close inspection this turned out to be a vein filled with pus and puriform clot. The peritoneum was perfectly normal in appearance. The uterus, which measured four and one-half and two inches (external measurements), was very pale in color, and softer than normal in consistency. The placental site was somewhat elevated, and exhibited a thin film of apparently fibrinous exudate on its surface. The vagina was normal. The fourchette had been torn, and a slight tear was found in the perineum. The surfaces had failed to unite, and the stitch holes were perfectly visible from side to side. No signs of healing were noticed. Careful dissection of the vagina and broad ligaments after removal showed the veins running from the neighborhood of the perineal laceration to be partly filled with puriform clot, and to present the appearance of acute phlebitis.

Microscopic examination demonstrated the presence of streptococci in great numbers in the clot. The posterior aspects of both forearms and of the left arm presented an extensive subcutaneous suppuration, the pus spreading widely beneath the skin, and but to a very slight degree along intermuscular septa. On the left side there was also subcutaneous suppuration over the back of the hand, extending to the roots of the fingers. The calf of the right leg, on incision, was found in the same condition as the arms, the suppuration being extensive, but strictly limited to the subcutaneous tissues. About twelve ounces of pus were found here. Phlebitis was found extending up into thigh.

Post-mortem examination of the child. The examination was made twenty-four hours after death. In the left leg the tissues were in a markedly edematous condition, the cut section of the tissue presenting a gelatinous appearance similar to that found in the first operation on the mother. In the right palm, at the base of the thenar eminence, there existed a collection of fluid, forming a tumor the size of a walnut; the contents resembled thin pus, being white and opaque. This fluid was subsequently examined microscopically, and was found to be an almost pure culture of a streptococcus; there were almost no pus cells. The right arm and forearm showed the same edematous condition noted above. There was nothing abnormal detected in the examination of the viscera.

Bacteriological examination. From the cultures taken at the times noted in the history from the matter, a form of streptococcus was found. This presented the characters claimed for the streptococcus pyogenes. Two guinea pigs were inoculated from a culture in bouillon, but without any perceptible effect upon the animals.

Remarks by Dr. Wright. The histories of these two cases contain many points of interest, and my intention is to refer briefly to some of those which I consider the most important.

Nature. I think that both cases are examples of that form of septicemia which long ago was called pyemia by clinicians. Pathologists are not in love with the word, but have not furnished us anything better as a substitute. As usual, streptococci were found in abundance; but whether they formed the septic matter, or carried it, or were simply "accidental concomitants," I think there is no evidence to show. In many respects it appeared like that milder form of septicemia which frequently ends in recovery. The nerve centres were not suddenly overpowered by the intensity and virulence of the poison, as is the case in the most malignant form, which kills so rapidly, and leaves us little in the way of gross lesions to be found *post mortem*. And yet the blood vessels appear to have been the principal carriers of the poison; consequently, I would suppose there was no let or hindrance to a rapid infection of the whole system. The serous and mucous membranes were remarkably free from any signs of serious infection. Why, I do not know. The force of the poison appeared to have been expended in the subcutaneous tissues; but there must have been a serious infection of certain nerve centres, which produced the extreme rapidity of respiration, which was out of proportion to the accompanying symptoms. Why this rapidity of respiration was most marked, as a general rule, during sleep, I do not know.

Origin. The origin of the septicemia was in both cases involved in considerable obscurity. I think that up to the time of birth the mother and fetus were well. There is nothing to indicate that the child was inoculated by the mother while nursing. In fact, the child showed evidence of illness before or about the same time as the mother. Two or three other children were nursed by the mother without receiving any harm. My opinion, stated briefly, is as follows:—There was a certain amount of foul discharge in the vagina, which poisoned the child as it passed through the parturition canal; this same discharge probably infected the mother through the open-mouthed veins in some vaginal rent, or, most likely, in the slight perineal rupture. The physicians and nurses had no knowledge of any such discharge, but her former methods of living would point to the possibility or probability of such a condition. There was no douching of the vagina before labor, nor for some days after.

Symptoms. In a general way, the symptoms were those of an ordinary surgical pyemia, although there were no pronounced rigors. The temperature chart is very interesting, and yet very like that which was not uncommonly seen in both hospital and private surgical practice before the days of antisepticism. The pulse was not particularly rapid, and not at all like that which is found in septic peritonitis. For many years, especially since Mr. Lawson Tait gave us certain hints on this subject, I have watched the condition of the pulse when things go "queer" after abdominal sections and childbirth, and I have never seen a case recover where it increased in rapidity steadily and continuously for four or five days—as, for instance, rising from 80 to 150 in the way described. In this case the rapidity of the pulse fluctuated considerably, and sometimes became so much reduced that I had strong hopes of the patient's recovery. The rapidity of the respirations, to which I have before referred, and which could not be accounted for by any evidence afforded either before or after death, was and still is a mystery to me.

Treatment. As soon as things went "queer," sulphate of magnesia was administered in quantities sufficient to keep the bowels well evacuated. Intra-uterine douches of 1-10,000 bichloride solution were administered, followed by douches of plain hot water, when the serious symptoms arose, but without much apparent effect. The best of nourishment was given in large quantities, as the patient fortunately had a good appetite during the greater portion of her illness. Whiskey was given in large quantities at times, and appeared to do more good than any other remedy; quinine appeared to have no good effect, and salol disturbed the digestive organs. The swellings were freely incised sometimes before any evidence of pus could be detected. With reference to the left leg, I noticed the swelling during one of my usual morning visits, and thought it would be better to make a free incision. I left instructions to have Dr. Primrose examine it when he came, and, if he concurred, to make the incision as he had done in the other swellings. He, unfortunately, did not see it for some hours afterwards, and then thought it was so much improved that surgical interference was unnecessary. On the following morning there was such an apparent improvement in the condition that I quite agreed with his opinion. At the same time, as the results showed, we were both sadly wrong.

Post-mortem appearances. Dr. Caven's statement of the *post-mortem* appearances is so clear and explicit that nothing remains for me to say except that they were, to a large extent, what one who had carefully watched the case would expect. We had supposed that the point of infection was somewhere in the perineal tear; the *post-mortem* evidences show that there could be little doubt as to the correctness of that opinion. I may say in this connection that I have thought for a long time that in the majority

of cases of puerperal fever the poison was received into the system through open-mouthed vessels existing in the tears of the perineum, or sometimes simply the fourchette.

Lessons to be learned. For many years I have been decidedly opposed to post-partum douching as a routine practice, but I have held no decided opinion as to the advisability or otherwise of such douching before labor. In the year 1892 we tried both methods in the Burnside. For six months a single antiseptic douche was given in all cases during the first stage of labor; for another six months no such douching was done. The results were uniformly good in both periods. We then adopted the rule that there should be no douching unless there appeared to be some occasion for it. I have for a long time had an idea that the mucus which was secreted by the vaginal mucous membrane served a good purpose in labor, and therefore I have supposed its removal by a hot douche might do harm rather than good. However, I have been so much impressed with this case that I have decided that, in the future, all patients who are under my charge in the Burnside shall receive one antiseptic douche, thoroughly and carefully administered, early in the first stage of labor. I have not, however, adopted such a rule in private practice.

With reference to treatment, I learned but little as to its effect in this case. Good food, including milk, eggs, and meat, and stimulants, mostly whiskey, did good. Nature appeared to be endeavoring to throw off the poison in superficial abscesses. We endeavored to help nature by freely opening and draining such abscesses. The poor girl showed wonderful vitality, and made as brave a fight against the dread enemy as I have ever seen. It has been a matter of extreme regret that we allowed ourselves to be deceived by false appearances in the swelling of the left leg. It was decidedly humiliating to learn, *post mortem*, that we had left twelve ounces of poisonous pus in a large cavity with a simple covering of skin; and yet our ignorance was certainly not the result of carelessness. In another similar case I would incise freely all such swellings, whether pus were detected or not.

EXCISION OF THE ELBOW JOINT FOR TUBERCULAR DISEASE.

BY A. PRIMROSE, M.B., C.M., EDIN.; M.R.C.S., ENG.,

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L M., æt. 22, came to me in February, 1891, with the following history: Seven years previously, she fell on the ice and injured her left elbow; the injury was slight, and did not attract attention until some weeks after, when she complained of soreness, with some swelling, in the joint. She consulted a doctor, who told her she had an inflamed bursa on the back of her elbow. He painted it with iodine and bandaged it, and subsequently blistered it, with the result that the swelling disappeared and the arm improved. Two years after this she injured her arm again whilst skating; it began to ache ("a dull ache"), but did not swell; she tried various methods of treatment, and found the greatest relief from the use of camphorated oil. She fell downstairs in January, 1891, and hit her elbow; subsequently the elbow got worse, and swelling recurred. She came to me in February, 1891, and I then found a swelling over the olecranon process; this I lanced and drew off some fluid, and subsequently injected carbolic acid, and applied a firm bandage. This swelling disappeared entirely, and did not return. At that time there was slight limitation of movement at the elbow joint.

A year elapsed before I saw her again, when she informed me that about three months previous to her visit the stiffness became much more marked, and the arm had been gradually getting worse; the pain, stiffness, and swelling increasing.

On March 20th, 1892, the following note was made:

Swelling about the joint, marked posteriorly at either side of the olecranon, with distinct thickening over the head of the radius. On palpating the swelling between the olecranon and the condyles, and at a point immediately above the olecranon, a curious crepitant sensation was obtained. The affected joint, too, feels hotter than that of the sound side. The maximum amount of extension is to an angle of 100°; of flexion,

80°; so that the amount of actual movement is through an angle of 20°. There seems to be absolute fixation, as far as pronation and supination are concerned.

By actual measurement one finds a considerable degree of wasting; this would probably be more evident if the patient were not left-handed. She has pain in the joint at times, particularly in damp weather, but never very acute. She complains of tenderness on pressure over the head of the radius.

Such was the condition of the patient when she presented herself to me. As to her family history, she tells me that her mother died of consumption; she herself informed me that she had "weak lungs," but on examination of her chest I found nothing abnormal.



The disease was evidently very limited in character, and I determined to try the effect of rest, plus the application of compound mercurial ointment under strapping (Scott's dressing). This was done, and the patient was given cod liver oil and syrup of the iodide of iron. I watched her carefully for a month, but could not detect any improvement. I told her that I was willing to continue the treatment by rest for a prolonged period, possibly a year or more, but suggested that she might make more rapid progress by operative procedure. She was anxious for the latter course of treatment, and accordingly an operation was performed on May 2nd, 1892. Dr. Cameron kindly assisted me.

It is not necessary to describe the details of the operation. Suffice it to say that I performed the operation of excision of the elbow joint through a posterior median incision. On opening the joint the tissues

within were soft and gelatinous in character, and of a dirty gray color. On removal of the articular ends of the bones, the surfaces of the sections were examined, and all appeared healthy, excepting a carious depression extending one-half to three-quarters of an inch upwards in the outer portion of the humeral shaft. This was thoroughly scraped with a sharp spoon. The only portion of the articular surfaces of the bones which appeared diseased was the articular cartilage over the capitellum, which was eroded. There was a considerable amount of gelatinous material about the joint, which was freely removed by means of a sharp spoon and scissors. The joint was now apparently free of diseased tissue; it was douched with 1-1000 perchloride of mercury solution, and sutures were inserted. Two medium-sized drainage tubes were placed in the centre of the wound, and a dressing of iodoform gauze and salicylic wool was applied.



The forearm was placed in a position midway between pronation and supination, and the elbow flexed at an angle of 135° . The wool was lavishly applied over the entire limb, and this, secured by a firm bandage, formed an excellent splint.

Subsequent course. The temperature remained normal throughout. Two days after the operation the dressing was changed, as discharge had come through and appeared on the surface of the dressing. The wound looked well.

May 7th (five days after operation). Dressed. One tube was removed and the other shortened. The dressing was repeated two days subsequently, and the stitches removed. The drainage tube was not removed until the twelfth day after the operation, as a slight discharge continued.

It was now discontinued, however, and the wound was soon soundly healed.

On May 21st (nineteen days after the operation) passive movement was begun. Flexion was performed, *without pain*, through an angle of 45° . Pronation and supination were also performed fairly satisfactorily.

The patient gradually gained voluntary control over the joint, and two months after the operation she could voluntarily flex the forearm, whilst the amount of movement possible was almost normal. The muscles gradually regained their power, until ultimately she had an extremely useful joint; and I now present the patient (a year and eight months after the operation) for your inspection. The amount of flexion and extension is almost perfect, and pronation and supination are also well performed. The power of pronation is indicated by the fact that she is able to play the piano.

Remarks. The result of the operation of excision of the elbow joint in this case leaves little to be desired. The cuts shown in the preceding pages are from photographs, and they indicate the extent of movement now possible. The patient has a good useful limb, and there is no indication of any return of the disease. Many forms of splint have been devised for use in the after treatment of such excision cases; but, in my opinion, nothing answers so well as the simple application of absorbent wool in large quantities, over which a bandage is firmly applied from the finger tips to the axilla.

ACUTE MANIA FOLLOWING THE OPERATION OF TRACHELORRHAPHY.

By K. N. FENWICK, M.A., M.D.,

Professor of Gynecology, Queen's University,
KINGSTON, ONT.

THE occurrence of these cases of acute mania following the operation of trachelorrhaphy leads one to inquire what can be the connection between the operation and the mental state.

CASE 1. Mrs. I. G., æt. 30, consulted me about July, 1891, for hemorrhagia, pelvic pains, and backache. I found a double laceration of the cervix, and did a trachelorrhaphy the following week.

All went well for about ten days, when she became melancholy, and at times maniacal. This lasted for a couple of weeks, and gradually subsided.

On enquiry of her physician a few days ago, he says she is doing nicely, is quite herself now, and has no signs of mental aberration, although troubled at times with insomnia.

CASE 2. Miss K. C., æt. 24, consulted me for lacerated cervix. She had been confined four years before of an illegitimate child, and for a year back has been at times insane.

I did a trachelorrhaphy for a double laceration, and for a week afterwards she did well, and her mind seemed to be greatly improved. After this the mental symptoms became so marked, and the patient so troublesome, that she was removed to Rockwood Asylum.

As the patient became stronger the mental excitement passed away, and she was discharged in November, 1891.

Her physician wrote me a few weeks ago that she has been married for about a year, and expects to be confined in two months; and that apparently she is quite well, and has enjoyed good health ever since she left the asylum.

CASE 3. Mrs. W. M., æt. 35, had suffered from hemorrhagia, and had a disagreeable yellowish discharge, was weak and anemic, and confined to bed for some weeks. I found the cervix badly torn, and a condition

of hyperplasia and cystic degeneration of the os. Indeed, the appearance was so like cancer that I resolved to do a trachelorrhaphy, and remove all the diseased tissue, explaining to her husband my doubts as to the result, for I feared cancerous degeneration had already taken place. The operation was performed on the 17th of May, 1893, and all went well until the sixth day, when she seemed to talk rather queer, and in a few days developed well-marked maniacal symptoms. The temperature in this case rose to 102° a few days after the operation, but soon subsided.

She became so troublesome that we had to strap her in bed, and for a week she had to be fed by means of a catheter passed through her nose into the oesophagus. The symptoms gradually abated until she was able, in four weeks, to leave the hospital, and to-day (August 14) she is perfectly well and able to do her housework. The cervix healed perfectly, and the uterine function is normal.

I believe Dr. T. G. Thomas was one of the first American gynecologists to report cases of mania occurring after gynecological operations. Dr. Kiernan, in his article on "Mental Symptoms after Surgical Operations," says the cases most frequently reported of late occur in connection with operative gynecology.

Barwell, Leith, Thornton, Dent, Lawson Tait, and Denham relate cases after oophorectomy and hysterectomy. Dr. Harrison relates a case in which he had removed a round-celled sarcoma from the vaginal wall and neck of the uterus by Simons' scoop, and applied the cautery. The patient's health had been much depreciated by profuse and offensive discharge and repeated hemorrhages. She recovered rapidly, but unexpectedly became insane, and was sent to Bloomingdale Asylum.

Dr. Baldy read a paper before the American Gynecological Society on "Insanity Following Laparotomy." From eighteen institutions he received reports of fifteen cases, and one of his own for rectocele, and another having chronic confessional insanity after oophorectomy.

With reference to my own cases, there was certainly a previous insane taint in the second one; but in the last case, while there had been family anxiety and worry, there had been no mental trouble in the patient before, nor any family taint. I did think there might be some sepsis in this case, although the temperature was hardly of that character.

The very fact that acute mania more frequently follows gynecological operations than other surgical procedures might point to the close proximity of the sympathetic nervous system, and might suggest, perhaps, that dilatation of the abdominal blood vessels from reflex inhibition of the splancines may be a direct result.

The subject, I think, is worthy of attention, and leads us to recognize, with Woundsby, "how entirely the integrity of the mental functions depends

upon the bodily organization, and as physicians we cannot afford to lose sight of the physical aspects of mental states, if we would truly comprehend the nature of mental disease. We recognize the existence of an intelligent mental force linked in harmonious association and essential relations with other forces, but leading and constraining them, and led and constrained by them, in its manifestations."

INTESTINAL TUBERCULOSIS.*

BY DR. W. M. BARNHART,

EAST TORONTO.

WILLIAM I., æt. 17, born in Canada; occupation, machinist's apprentice; had the ordinary diseases of childhood, with no bad results. Present illness commenced January, 1892, with influenza, followed in a month by a second attack, which terminated in chronic bronchitis, lasting about three months. By this he was considerably reduced in flesh, having failed about twenty pounds. About the middle of August he had an attack of lobar pneumonia, affecting the lower lobe of the left lung, from which he made a very fair recovery, gaining a little in weight. In December he came again under my care, much emaciated, with hectic fever and a troublesome diarrhea, three or four liquid motions each day. Early in January, 1893, severe abdominal pain developed, which with the diarrhea continued very troublesome till about the first of March, when they gradually ceased, there being scarcely any pain or tenderness, and the bowels becoming quite regular every one or two days. Temperature was irregular, ranging from 99° to 103° F. There was no expectoration and very little cough, until the last three or four weeks of his illness, when a cavity of considerable size was scooped out of the upper lobe of the left lung. Emaciation was extreme, bedsores a little troublesome, cyanosis very marked. Death by exhaustion and respiratory failure occurred on April 10th.

Autopsy eighteen hours after death. Body very much emaciated; rigor mortis had almost disappeared; *post-mortem* staining in dependent parts.

Pericardium, smooth and normal in appearance, contained about four ounces of clear fluid; heart, normal.

Both pleuræ were adherent; left very firmly. Lungs studded with yellow tubercles in all parts; a cavity in upper lobe of left lung.

Spleen, normal in size; lower half adherent to abdominal wall.

Liver a little enlarged, otherwise normal; stomach, normal.

* A paper read before the Pathological Society of Toronto.

Intestine not distended, no adhesions. Ilium contained isolated ulcers, and miliary tubercles were very numerous in mucous membrane at lower part.

Cecum and vermiform appendix very much ulcerated, the latter distended almost cystic. The upper half of colon was ulcerated; the lower half was not examined, but appeared normal from its peritoneal surface. The mesentric glands were enlarged and congested; some of them showed signs of commencing suppuration. The glands in the meso-colon were also much enlarged. Other organs were not examined.

In the lowest part of the ilium, where tubercular ulceration is most common, the process can be seen in its various stages: (*a*) A mere inflammatory nodule, or tubercle, occupying the submucous and mucous coats; (*b*) caseation of centre of nodule; (*c*) softening of caseous matter; (*d*) perforation of mucous membrane covering the softened spot, forming the typical tubercular ulcer situated near the mesenteric attachment of the intestine, elliptical in form, with indurated margin and a rosyl-hued base, consisting of the muscular coat more or less infiltrated.

The location of the ulcer can be readily recognized from the peritoneal surface by the serous coat being thickened, rough, and opaque from infiltration.

The ulceration of the cecum, appendix, and first half of the colon is extreme, fully half of the mucous membrane having been destroyed, leaving bare the infiltrated muscular coat.

The chief feature I have aimed at demonstrating with the microscope is the presence of bacilli tuberculi in great numbers in the infiltrated margin of the ulcer.

Selected Articles.

ON THE NEUROSIS FOLLOWING ENTERIC FEVER KNOWN AS "THE TYPHOID SPINE."

BY WILLIAM OSLER, M.D.,

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IN 1889 Dr. Gibney, of New York, described at the American Orthopedic Association a sequela of enteric fever which he called "the typhoid spine," and which he regarded as a perispondylitis—"meaning an acute inflammation of the periosteum and the fibrous structures which hold the spinal column together." He stated that his reason for the use of the word was "the production of acute pain on the slightest movement, whether lateral or forward, and the absence of any marked febrile disturbance or neuralgia." He described four cases.

In the first, a lad of fifteen years, toward the end of convalescence, complained of severe pain in the back, particularly in the lumbar region, and especially after any movement. There was no disease of the bone; no pain in the distribution of the sciatic or anterior crural nerve. He was seen in the autumn of 1882 with Dr. Beverley Robinson. A spinal brace afforded relief, and in the course of two or three weeks he was practically well, but the brace was worn for more than a year.

The second case, a young man of twenty-four years, had an attack of typhoid fever, which ran a normal course. After convalescence was well established he complained of pain in the back, but he was able to be up and about, and played tennis. After a fall at tennis the pain became very severe, and he suffered so excruciatingly that he could only rest in a recumbent posture. Deep pressure over the iliac region on the left side and lateral or antero-posterior motion of the spine caused excessive pain. He had some fever. The symptoms persisted from the latter part of November until the beginning of January, but it was not until March that he was able to get about.

The third case, a lad of eighteen years, had typhoid fever in November, was convalescent by December 27th, and went to New York. On January 10th he fell while skating, and struck his left hip. A week after this he had pain in the region of the lumbar spine. The stiffness became more marked and the pains increased in severity. On the 10th of February he went to bed and was seen by a surgeon in Albany, who regarded the case as one of psoas abscess. There was no fever, no evidence of disease of the spine, but the patient could not move without exquisite pain. He did not recover until May.

The fourth case seems to me to belong to an entirely different category, as it was an instance in which during typhoid fever a boy had kept both limbs flexed on the abdomen, and in convalescence was unable to straighten them—an event met with in many protracted illnesses in which the patient lies curled up in bed with the legs flexed.

In 1890, in a discussion at the Association of American Physicians following the reading of a paper "On Some Points in the Natural History of Enteric Fever," by Dr. James E. Reeves,¹ Dr. Loomis, sr., referred to Dr. Gibney's observations and to one of the cases he had asked Dr. Gibney to see. Dr. Loomis knew of no reference in literature to a similar condition. Dr. Jacobi at the same meeting, besides protesting against the introduction of a new name, such as "typhoid spine," suggested that, in the absence of temperature, it might be one of two things, either a neurosis or a spondylitis, remarking that mild forms of spondylitis are not so uncommon as they are believed to be.

In the *American Text-book of Medicine* (page 90) Dr. Pepper remarks in the article on typhoid fever that he has observed in a series of cases "obstinate periostitis of the sternum, or of the crests of the ilia, or in two instances, judging from the location of the pain, and from the effect of movement of the trunk, of the front of the spinal column." Eskridge has also described a case.

I have not been able to find any other references in text-books or monographs on typhoid fever, either in English, French, or German. My attention had not been called to the condition until recently, unless, perhaps, a case which I saw several years ago with Dr. Grasset in Toronto was an illustration—a young officer, invalided from India after a prolonged fever, who had for many months attacks of the most severe pain in the back on the slightest movement, which incapacitated him completely; though when seen by me he looked strong and robust, and had a good appetite. He subsequently got quite well.

The two following cases are, I think, illustrative of the condition which Dr. Gibney has described:

¹ Transactions of the Association of American Physicians, vol. v., 1890.

CASE 1. O.T., aged twenty-five years (hospital, No. 8201), admitted, complaining of pains in the back, hips, and stomach. The family history is good. His father and mother are living and well. One brother died of typhoid fever.

Patient was strong and well until July, 1892, when he had a very severe attack of typhoid fever, with relapse. He was in bed for nearly three months; very slow convalescence. He remained well for three weeks; then the present illness began with pains in the back and hips, usually of a shooting character, and paroxysms of pain in the abdomen, of which he would sometimes have several in the day. He had to take again to his bed, and was there for seven weeks, having much pain in the lower part of the back, and down the front of the legs. He never, apparently, from his account, had any paralysis. About June of this year he was well enough to get out and do light work about the farm. In the latter part of June he had another attack of severe pain in the back and abdomen. He had not to go to bed. There was much aching pain and shooting in the right leg from the hip down to the knee. In the latter part of July and August he had severe attacks of diarrhea. Since August he has been up and about, but not working, and has been able to go out shooting. At present he has slight pains at times in the back and in the legs, and yesterday there was an aching pain from the left knee to the ankle. The appetite is good. He never vomits, though he often has eructations. Bowels are costive. He sometimes has dyspnea on exertion.

Present condition. Healthy-looking, well-nourished man, with fairly well developed muscles. He gives one the impression of a neurasthenic patient. Lips and mucous membrane of good color; tongue clean and moist; pupils equal; pulse, seventy to eighty; no increase in tension. Practically, the examination of the thoracic and abdominal organs was negative. The abdomen was soft and nowhere tender. The chief complaint is of weakness in the back, and it hurts him to turn in bed. He describes the pain which he had last year as beginning in the small of the back, passing round the hip bone, and then up the back. Judging from the scarring of counter-irritation, the chief trouble was thought to be in the lower part of the spine. There is still a little tenderness on pressure just above the left sacro-iliac crest. Patient gets out of bed readily and stands well; walks with a natural gait; does not sway with the eyes shut. After prolonged standing or walking he complains of great increase of pain in the back. The knee-jerks are present, a little exaggerated; there is no ankle-clonus. The most careful examination of the spine fails to reveal any signs of organic disease. The urine is normal.

The patient remained in the hospital a little more than a week, took large doses of nux vomica, and was encouraged to believe that he had no

serious organic disease. Subsequent examinations gave no additional information, but the patient evidently was highly neurasthenic.

CASE 2. A. A., aged twenty-one years, architect's assistant. Seen with Dr. King, May 10, 1893. Patient has always been a healthy man, and has never had any very serious illness. He is not of a robust constitution, and, though bright, not of a very strong mental fibre. There are no special nervous troubles in the family.

In November and December last patient had typhoid fever, an attack of moderate severity. On New Year's Day he sat up for the first time, and convalescence was gradually established. There were no sequelæ, no complications, and early in February he went to his work. He gained in weight, and looked very well. He remained at work about three weeks, complaining only at times of pain in the back, and of being very tired after sitting for a long time. One day he was very much jarred in the back by a sudden jerking of the cable car in which he was riding. Early in March, after complaining very much of his back and of the pain on moving, and of tired feelings, he took to his bed, where he has remained ever since. Dr. King tells me that the chief symptom has been pain on movement. His general health has been excellent. The appetite has been good, he has gained in weight, and he has slept well. He has been nervous, and at times almost hysterical. When quiet and at rest, and not attempting any movement, he does not complain of pain; but on turning, or on attempting to get out of bed, or even the thought of moving the legs, is enough to cause him to cry out. The pains have been in the lower part of the back, extending sometimes up the spine and down the back and sides, more rarely the front of the leg as far as the knee. He has no fever, no chills, but has sweated a good deal. He has had no swelling of the joints.

Present condition. Patient is a well-grown young man, well nourished; musculature of moderate development. The palms of the hands are moist and sweating, and he was somewhat excited, and at our entrance flushed over the cheeks and neck, and upper part of the chest. Face does not indicate any special strength of character, rather the reverse. Pupils of medium size, equal, active; tongue, clean. Patient was in the dorsal decubitus, his usual attitude. On pulling down the bedclothes he implored us not to touch him, as he was sure it would hurt him very much. The abdomen was full and natural-looking. On palpation, he complained of a good deal of pain in the left iliac region; but on withdrawing his attention, and pressing forcibly with the left hand in the region of the heart, and asking whether he had pain there, the right hand at the same time could be pressed deeply into the iliac fossa without causing any disturbance. The deepest pressure in the lumbar and iliac

regions failed to reveal any glandular enlargement or thickening. The inguinal glands were enlarged; no special sensitiveness along the anterior crural nerves. On asking him to lift the leg he said it was impossible, as it hurt him so much; but in a few moments, placing the hand beneath it, he lifted it apparently without pain. When lifted in a semi-flexed position, he said it was impossible for him to straighten it; but in a few moments it could be readily straightened, and he straightened it easily on the bed. There was no special wasting of the legs. He could move all the muscles freely, and was able to get up and stand on his legs if he took time. The sensation was perfect; the knee-jerks present, perhaps a little exaggerated; no ankle-clonus. The feet and ankles were perspiring freely. No swelling of the articulations, and no pain on pressure of the muscles or in the popliteal spaces.

On asking him to turn over on his left side he demurred very much, but gradually, and apparently with a great deal of difficulty, he got himself over. The legs could then be moved easily and freely; no pain about the hip-joints, and the legs could be flexed and extended readily. The spine was straight; the lower dorsal vertebræ a little prominent. No tenderness at any point along the spinal column. On both sides in the lower lumbar and sacral regions he was sensitive at a distance of an inch and a half or two inches from the middle line, and particularly toward the sacro-iliac synchondroses and along the posterior third of the crests of the ilia. He stated that these were really the points of greatest pain. On any attempt at twisting, the spinal column was very sensitive, and we could not induce him to sit up. In the attempts to make this movement he seemed to suffer a great deal of pain, and began to cry.

There were no sensory changes, no hemianesthesia, no hemianopsia. The patient said that his chief trouble was more the dread of moving, lest it should cause pain, than any pain itself. Four days ago he sat up for a couple of hours—got out of bed himself and sat on the chair—but felt very tired, and the back was painful. Practically, the examination in this case revealed neither Pott's disease nor neuritis.

He was ordered massage and electricity and the Paquelin cautery to the back, given strychnine internally, and urged to sit up a definite time each day.

June 10th. A few days after I saw him he was able to sit up, and improved rapidly. Went out on the 30th of May, and has been doing remarkably well ever since. Called to-day; looks in very good condition. No pain in the back; feels a little stiff; knee-jerks are normal; condition good.

CASES 2 and 3 in Dr. Gibney's paper are very much like the ones here mentioned, particularly in the fact that the symptoms developed after

convalescence, and in both instances there was a slight trauma—in one a fall while playing tennis, and in another a slight fall on the left hip while skating. In the case reported here the patient also lays a great deal of stress on the jar which he received by the sudden jerking of the cable car. In both the prominent symptom was pain on movement, and there was an absence of all signs of organic disease.

An explanation of the symptoms in these cases is by no means easy. As already mentioned, Dr. Gibney regards the lesion as a perispondylitis, an acute inflammation of the periosteum and fibrous structures holding the spinal column together; and with this view, judging from the quotation made, Dr. Pepper seems to agree.

Joint and periosteal troubles are by no means rare sequences of typhoid fever, but the symptoms do not usually develop (as in three or four of the cases here described) at so long a time after convalescence has been well established. The periostitis, seen oftenest about the sternum and the ribs, proceeds, as a rule, but not necessarily, to suppuration. I have on several instances seen a periosteal swelling disappear without suppuration. We do not have, so far as I know, protracted periosteal thickening, lasting for weeks or months, without suppuration; and it is difficult to conceive of the attacks of pain, such as are described in the second and third cases of Dr. Gibney's and in the second case which I here report, lasting for months, due to a simple perispondylitis, which in none of the cases passed on to suppuration. The general impression given by the patients whom I saw was that they were neurasthenic, and while, of course, it would be very illogical to assume that all of the instances are due to the same cause, yet I cannot help feeling that many of them are examples simply of a painful neurosis, an exaggerated condition of what was formerly known as "spinal irritation," and analogous to the condition of "hysterical spine" and "railway spine," in which the patients suffer on the slightest movement of the back or of the legs. In the second case reported the whole behavior during the examination was that of an hysterical patient; thus, he could not think of lifting a leg—even the idea was enough to give him agonizing pain—and yet in a few minutes he lifted it himself as he got out of bed. So also the slightest pressure in the lumbar or iliac regions would cause him to scream out; but while his attention was diverted pressure could be made with the greatest facility. The rapid recovery in a few days, with disappearance of all the symptoms, is quite inconsistent with any chronic perispondylitis.

I have recently seen a case presenting somewhat different features, but which I think may also be reasonably classed as a post-typhoid neurosis:

CASE 3. A.B., aged about thirty years, of New York city, consulted me October 2nd, 1893, stating that he had had trouble with his spinal cord. Family history was good; parents living; one sister, however, was insane.

He was nervous as a boy; used to tremble very much when excited, and had what he speaks of as nervous fits. He had gonorrhea three or four times; never had lues; acknowledges excesses *in venere*. Takes alcohol, but is not a hard drinker.

September 23rd, 1891, he had an attack of typhoid fever of unusual severity, prolonged delirium, extensive bedsores, and very great prostration. Convalescence was not established until January 10th, 1892. During and after convalescence he was very nervous, and had had uneasy pains in the legs; his feet were tender, and he tired very easily. He had no pains in the back, no soreness; but the tenderness in the feet and nervous feelings persisted for six or eight months after convalescence, and he does not think that they have ever entirely disappeared. He attended, however, to his business, gained in weight, and felt pretty well, though never entirely free from uneasy sensations in the feet and legs. In the spring of this year these symptoms increased, particularly after some sprees. He had neuralgic pains in the legs and felt weak and unstrung, and evidently got into a very nervous condition. He had a dread of walking, and could scarcely force himself to go as far as the corner of the street. He slept badly, and got into a state of extreme neurasthenia. There were twitchings of the muscles, the feet and hands felt numb, and he complained that when his shoes and stockings were off there was a smooth feeling, as if something was between the feet and the floor. At this time a doctor in New York suggested that there was some oncoming spinal trouble, and stated that in testing the sensation down the spine with hot and cold water he could not distinguish between them. He ordered him electricity and massage and general tonics, and for the past seven or eight weeks he has not been at work and has improved a good deal.

Present condition. Tall, able-bodied man; looks a little pale; gait is normal, not spastic; station good; no Romberg symptom; no atrophy of muscles; legs scarcely in proportion, however, to rest of the muscular development. The spine is straight; nowhere painful on pressure; no special prominence of any vertebra. Sensation is everywhere good; no retardation; distinguishes easily between heat and cold. He thinks that about the feet and ankles the sensation is a little blurred and unnatural. He feels, however, a sharp point, and distinguishes readily different objects, and the thermic and painful sensations are unaffected. He has no abnormal sensations about the back and abdomen, and has not any sense of constriction

or girdle pains. There is no vasomotor disturbance. He sweats, however, easily and the hands are clammy, and he has had at times, he states, marked blueness and congestion of the feet, and they are often cold in the morning.

The reflexes are increased, knee-jerks active, particularly on the left side, and a slight ankle-clonus can be obtained. The skin reflexes are normal. There is no disturbance of the special senses. The pupils are a little large, equal, and react to light. The optic disks are normal; there is no restriction of the visual fields.

The examination of the thoracic and abdominal organs is negative.

Here, after a protracted and severe attack of typhoid fever, with delirium and severe nervous symptoms and tardy convalescence, the patient had disturbed sensations in the feet and legs, aggravated shortly after, but diminishing somewhat within five or six months, never entirely disappearing, and recurring with some intensity during the period characterized by pronounced neurotic manifestations. Unlike the cases before described, there were no pains in the back and abdomen, only a sensation of weakness. The symptoms suggest (1) central (spinal) lesion; (2) neuritis; or (3) a neurosis. From his statements, it was evident that the doctor in attendance feared a central affection; but the patient's condition two years from the date of the fever would speak very strongly against any such view; nor does the case conform in its clinical history to a neuritis. The man insists that the feelings he has now in his feet were also present during the convalescence, and some months subsequently. There did not appear to have been any very special muscular weakness, such as sometimes develops after an attack of typhoid fever without any evidence of peripheral neuritis. In the paper by Dr. George Ross, "On Paralysis after Typhoid Fever,"* he refers to those cases in the following words: "It is not unusual after typhoid fever of considerable severity to find a definitely enfeebled condition of the lower extremities persisting for some time, and sometimes a person never entirely recovers his capacity for walking long distances. Such paretic cases have never been specially studied, but it is probable they would if any should fall under the head of defective innervation from prolonged exhaustion of the nervous centres." On the other hand, in the case under discussion the history and the general appearance of the patient suggest a neurosis following typhoid fever. The paresthesiæ such as described are not uncommon symptoms of neurasthenia, in which, also, exaggerated reflexes are not at all infrequent.

It is not unlikely that under the designation of "typhoid spine" Dr. Gibney has described several distinct affections, and I would not be under-

* Transactions of the Association of American Physicians, vol. iii., 1888.

stood as holding that there may not be a perispondylitis. Nor are all of the painful backs following typhoid fever neurotic. Thus, a patient recently under my care (hospital, No. 8049) was admitted in an attack of moderate severity about the end of the third week, the temperature falling to normal by the twenty-sixth day; then, after a period of apyræxia of seven or eight days, he had a well-marked relapse of about two weeks' duration. During convalescence he began to complain of severe pain in the back of the neck, and at the attachment of the muscles of the occipital bone. There was no actual tenderness in the vertebræ, and movements to and fro and laterally were not associated with any very great pain. An application of the Paquelin cautery relieved it for a few days, and then it recurred. The examination from the pharynx was negative. The condition persisted for at least two weeks, and, while at first confined to the neck, subsequently he had soreness and stiffness of the back; he walked stiffly, and held himself very erect. He says that it is better when moving about than when lying down. No special tenderness in the spine; no sharp pains; no increase in the reflexes; no indication of neuritis. He gradually improved, and when discharged he was very much better, having gained 11 ½ pounds in weight.—*The American Journal of the Medical Sciences.*

HEMORRHAGES OF PREGNANCY: THEIR MANAGEMENT.¹

BY JOHN O. POLAK, M.D., BROOKLYN,

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the Long Island College Hospital.

THE time allotted for this paper is so limited that I will only speak of the more important hemorrhages: bleeding as a symptom of miscarriage, placenta previa, and accidental hemorrhage from the partial separation of a normally placed placenta, occurring ante-partum; while of those post-partum I will consider hemorrhages from uterine atonicity, from lacerations in the cervix, vagina, and vulva, and, finally, secondary uterine hemorrhage, leaving rupture of the uterus and ectopic gestation to the consideration of others of a wider experience.

Hemorrhage as a sign of miscarriage, when very slight, may be controlled by rest in bed, the hips elevated, with the initial use of morphia per rectum, followed by ʒj. doses of the fluid extract of viburnum, or gr. iv. pill of the solid extract. Though I admit the value of opium and the bromides in these cases, and their almost universal use, I must urge the efficacy of viburnum as a uterine sedative.

If time would permit, I should be pleased to report in detail the histories of thirty-two cases of threatened abortion treated by rest, initial suppository of opium, and fluid extract of viburnum prunifolli, no case resulting in miscarriage. The more severe cases with abortion inevitable, cervical softening, dilatation, and the ovum separated, perhaps protruding, everything being aseptic, the cervical and vaginal tampon is to be advocated.

Method. After emptying bladder and rectum, patient in Sims' position, douche with an antiseptic solution, then through a Sims' speculum, with anterior lip of the cervix fixed, carry strips of iodoform-gauze into the cervical canal through the internal os, making a firm intra-cervical plug; then pack anteriorly, posteriorly, laterally, and, finally, against the cervix, filling the whole vagina with gauze.

¹ Read before the Section on Obstetrics of the Pan-American Medical Congress, Washington, D.C., September 5th, 1893.

The importance of the intra-cervical plug is threefold :

(1) It stimulates uterine contractions by its presence.

(2) Thus hastens dilatation.

(3) Completes the separation of the ovum by causing the blood to accumulate between the womb and fetal membranes.

When the hemorrhage is profuse, sepsis imminent, or the patient suffering from acute anemia, thorough evacuation with the aseptic finger or curette is the procedure. If the uterus be septic, irrigate the cavity with one-third strength solution of peroxide of hydrogen, and subsequently pack with iodoform-gauze, after leaving from thirty to sixty grains of iodoform within the cavity.

There is no difference of opinion as to the necessity of controlling the bleeding in cases of inevitable abortion, and it is generally agreed that the tampon is the method, *par excellence*, leaving it in position from six to twelve hours. Its removal will be followed by the ovum or fetus in the majority of cases, and the immediate symptoms will subside, yet the uterus may not be completely emptied, especially in the early months; portions of the secundines will certainly be retained, later the placenta. In these cases shall we pursue the expectant plan, waiting for subsequent hemorrhage or ptomaine absorption before interfering, or advise radical interference? Notwithstanding the views of such men as Tarnier and Parvin, I believe better results will be gained, and many deaths from sepsis be averted, by the curette, irrigation, and drainage, with iodoform-gauze ; if possible, it is safer to use the aseptic finger than either the sharp or dull curette. Ergot should not be given until the womb has been relieved of its contents.

I want to add to the record of Diirhssen, who reports one hundred and fifty cases with no deaths attributable to the treatment, twenty-seven cases during the last two years, with no deaths and perfect recovery ; the patients subsequently having neither suffered from hemorrhage nor endometritis, which are such frequent sequels to improperly managed miscarriages.

Placenta previa. Clinically, a placenta is previa when it has an attachment in the lower zone, and the cervix, from which it is detached during canalization, or as Rigby describes it in his essay more than one hundred years ago : "A previa is fixed to that part of the womb which always dilates as labor advances." The hemorrhage is primarily from the ruptured uterine sinuses exposed as the placenta is separated ; and secondarily from the placenta itself.

Clinically, we may classify the varieties as total, lateral, and marginal.

The treatment is best considered under three heads :

First, before viability ; second, after viability ; and, third, the management of labor.

Before viability. Diagnosis made with the fetus dead, total previa,

or copious hemorrhage, empty the uterus ; none of these conditions being present, wait.

After viability. Act with the occurrence of the first hemorrhage, for not only is it proven by statistics and clinical observation that the mortality in these cases is greatly reduced by induction of premature labor, but it is not right to leave the patient to the chances of a fatal result from hemorrhage, nor allow her strength to become exhausted by repeated or continued bleedings—not to speak of the nervous strain she sustains. Murphy and Barnes advocate separation of the placenta within reach by insinuating the finger through the os between placenta and uterine wall, and sweeping it about, thus detaching the placenta from the walls of the womb, as high up as the finger can reach ; then put in a Barnes' bag and wait ; the bleeding will not continue with dilatation if the placenta has been sufficiently separated at first. Proceed in this manner until the os is fully dilated ; then decide which is the preferable course to pursue : forceps, version, or to leave it to nature. Murphy "gives ergot freely to start up pains." This I do not believe to be safe practice.

If the cervix be closed, douche, then tampon with iodoform-gauze, taking special care to introduce strips in through the cervical canal. Remove after four or five hours, keeping the patient under close observation, and the cervix in most cases will admit one or two fingers. There is now ample dilatation to perform version by the Braxton-Hicks method ; bring down a foot, which acts as a most efficient tampon, and by drawing it through the os perfect control of the hemorrhage may be had. Then leave to nature as far as possible. Let me urge in this connection separating in all cases, when possible, the two operations of version and extraction.

The advantages of podalic version by the Braxton-Hicks method—first, it is possible to turn when the os will only admit one finger ; second, by early rupture of the membranes further separation of placenta is prevented ; and, third, the breech acts as an aseptic natural tampon controlling hemorrhages.

In my last two cases, considering the fetal mortality, and the mothers desiring to bear living children, hemorrhage occurring at the end of eighth month I resorted to bi-polar version, Dührssen's incisions in the cervix extraction, manual delivery of placenta, and the intra-uterine tamponade, with good success. It must be borne in mind when the incisions are used that the portia-vaginalis must be effaced, and we should be prepared to repair the cervix at once to control hemorrhage, if necessary. When labor occurs spontaneously, tampon to control hemorrhage and promote dilatation, turn and extract ; forceps may be used if the head is engaged.

Digital dilatation, podalic version and extraction, have proved success-

ful in the hands of many. The incisions are quicker if the cervix be effaced. In total previa, as recommended by Wigand, Zweifel suggests, to avoid perforating the placenta, that the fingers be carried over the edge anteriorly, thus reducing fetal mortality, though less hemorrhage is caused by perforation. In head presentations, previa lateral or marginal, pains good, strong, and regular, there being no disproportion between the head and pelvis, rupture the membranes, apply a binder and wait ; deliver by nature or forceps.

Accidental hemorrhage from partial separation of a normally placed placenta.

Varieties : concealed and apparent.

Management. If the os uteri be sufficiently dilated to admit of delivery either with forceps or podalic version, one or the other is to be employed. If undilated, digital dilatation, the Barnes' bag, or, if the portio-vaginalis be effaced, the bloody method must be employed ; then rupture the membranes, and deliver by either forceps or version. Remove the placenta immediately, and tampon the uterus with iodoform-gauze to prevent further hemorrhage. To combat the acute anemia in these cases lower the head; give stimulants hypodermically, and a saline infusion between the scapulæ. Craniotomy may be resorted to if the fetus be dead or non-viable. I wish to condemn ergot in these cases before delivery, as giving rise to a spasmodic condition of the uterus, and constriction of the lower segment.

Post-partum hemorrhage from uterine atonicity. There have been innumerable suggestions as to the management of this accident, yet I will simply outline the methods which have been of most service to me, mentioning them in their order of application:

(1) Proper management of the third stage, waiting a full half hour before delivering if there be no hemorrhage ; grasp the fundus, and keep up continuous friction until retraction is firm. If bleeding occurs express the placenta at once, or remove it manually. After expressing the placenta, squeeze out the clots and press the fundus well into the iliac fossa. A full bladder after labor has caused hemorrhage from atonicity in my experience.

(2) Ergot hypodermatically deep into the tissues. Preferably, the posterior aspect of the thigh.

(3) Hot douche with the hand in the uterus, the fingers raking down the walls.

(4) The intra-uterine tamponade, which acts as an irritant, stimulating contraction, and by so doing plugs the open sinuses.

Cervical hemorrhage from laceration may be controlled by the aseptic suture, or the uterine and vaginal tampon, taking care to plug the lacerations.

Suture-ligatures will control tears in the vagina and perineum. Combat the acute anemia consequent upon flooding by lowering the head, stimulants, as ether, whiskey, ammonia, etc., hypodermically, auto-transfusion and subcutaneous injections into the loose cellular tissues, and rectal enemata of .6 salt solution at 100° F.

Formula of normal saline solution :

Rx.—Soda carb.	-	-	-	-	gr. xv.
Sodii chlor.	-	-	-	-	℥iss.
Aquæ	-	-	-	-	oii.

In conclusion, let me very briefly call your attention to secondary hemorrhage occurring one or more days after labor.

Mainly due to following causes : Retention of fragments of placenta, membranes, a placenta succenturiata, blood clots, especially in multiparæ, and full bladder.

Treatment. Empty the uterus with the fingers of blood clots, shreds, etc., douche, tampon, and give ergot.—*New York Journal of Gynecology and Obstetrics.*

Clinical Notes.

PARTIAL EXCISION OF THE ASTRAGALUS FOR CARIES: RECOVERY, WITH PERFECT MOVEMENT AT THE ANKLE JOINT.

BY A. PRIMROSE, M.B., C.M., EDIN.; M.R.C.S., ENG.

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THE patient, D.B., æt. 14, was admitted to the Children's Hospital under my care, with the history that, a short time previously, he had been kicked by a companion in the region of the right ankle. The ankle had troubled him a year previously, pain and swelling having occurred at that time. A few days subsequently the ankle began to swell, and became red.

On admission, January 19th, 1893, he complained of great pain in the ankle. Temperature, 103° . Suppuration had occurred, and a sinus existed over the outer malleolus, and one over the inner malleolus, both discharging pus. I operated on June 22nd. An incision was made over each malleolus, and a considerable amount of pus removed. I now found the astragalus bare and eroded. I scraped away the diseased bone and removed a large part of the upper portion of the bone, including a portion of the articular cartilage. An excavation of considerable size was made, exhibiting a direct communication from side to side of the ankle, between the two original incisions in the soft parts. The bony cavity and surrounding soft parts were thoroughly cleansed and douched with bichloride of mercury solution, 1 in 1000. The cavity was now packed with iodoform gauze, and an antiseptic dressing applied. The limb was secured on a splint, the foot being fixed at a right angle. The wound did well for a time, and the packing was changed at each dressing. The patient went to the Lakeside Home, and I did not see him during the summer months, as I was absent from the city. About a month after the operation, vesicles appeared on the foot and leg, and the skin was red-

dened and angry-looking. It was thought to be erysipelalous in character. In a few days this developed into a raw, bleeding surface. The wound, however, had closed. Up to this time a wet dressing of bichloride of mercury had been employed. It was now discontinued, and a dry dressing substituted ; the leg speedily assumed a normal appearance, and the boy made a complete recovery.

Remarks. The case is interesting as evidence of the amount of surgical interference which is possible at the ankle joint without permanent ill-effects. This boy now walks without a limp, and the function of the articulations implicated in the operation is perfectly preserved.

The clinical history also indicates the fact that the boy suffered from a local dermatitis, due to the employment of wet alembroth dressings. The writer has seen several instances of this, and has been struck by the erysipelalous character of the skin affection produced from this cause. In the present instance the cause was not discovered early, and consequently the process went further than usual before the trial of a change of dressing demonstrated the true cause of the condition. Whenever there is any indication of dermatitis under an alembroth dressing, some other form of antiseptic dressing should be substituted at once.

CLINICAL NOTES ON A CASE OF EMPYEMA—OPERATION,*

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THE following notes indicate the clinical history of a patient on whom an operation was performed for the relief of an empyema of long standing.

F.G., æt. 23; male. Was admitted into the Toronto General Hospital on October 10th, 1893, under the care of Dr. Cameron. Four years ago he was thoroughly healthy, and was working on the cable cars in Montana. The air of the city in which he worked was contaminated by noxious gas from smelting works. On January 24th, 1891, he was chilled on his car; he was taken home, and has been sick ever since. The chill proved to be the precursor of an attack of pneumonia. Shortly after this the doctor in attendance aspirated the chest, and drew off some fluid. This operation was performed six times in as many weeks, and on one of these occasions the chest cavity was washed out. He spent the summer of 1891 in Barrie, Ont., and felt better while there; but after coming to Toronto in September he began to lose ground, and became very weak. An abscess opened on the left side of his chest about this time, and left a sinus in the sixth interspace anteriorly, which continued to discharge—the discharge being thick and thin by turns, and usually offensive. He was losing weight, and suffered from night sweats. He had a constant cough, with profuse but difficult expectoration. His pulse was frequent, but temperature normal. On physical examination of the chest, breath sounds were absent over the collapsed lung, and the apex beat was seen under the right nipple. At this time he was placed under treatment as follows: Fellows' Syrup of Hypophosphites, with cod liver, oil were administered. He was directed to take breathing exercises, and the greater part of the day he spent in the open air, whilst at night he kept his bedroom window open. As a result of this treatment his sweats stopped, his cough decreased, and his appetite improved. The collapsed lung

* The notes of this case were taken by Mr. J. Stenhouse, M.A., Edin.

expanded considerably, and air entered the upper portion of the lung. His weight was, at the time referred to, 135 pounds, whilst a year previously he weighed 175 pounds.

During the winter of 1892 the discharge continued, and was at times streaked with blood. The following summer he returned to Barrie, but did not gain much benefit; towards the latter part of the summer, however, the sinus closed and remained so for five months, when it opened again. In May, 1893, a doctor attempted to insert a drainage tube, but was unable to do so; the operation had to be abandoned, as the patient choked under the anesthetic. During his whole illness there has been more or less edema of the feet and hands, while the finger tips are clubbed to a remarkable degree.

Such was his history previous to his admission into the Toronto General Hospital. As to his family history, it is stated that his father died of pneumonia, mother of Bright's disease, an uncle of phthisis, and a grand-uncle of "stonemason's lung."

Physical examination of the chest was made on admission. The right lung was normal. On the left side inspection reveals the depression of the infra-clavicular and mammary regions. On palpation, vocal fremitus above the fourth rib is perceptible, but it is absent below that point. Percussion gives a resonant note above that point and dullness below. The same condition obtains at the back on the same level. Bronchial breathing is heard over the upper portion of the lung, while just above the fourth rib it is cavernous. Below this level the breath sounds cannot be heard. The sputum examined contained no bacteria. The apex beat of the heart is diffuse, the mitral sound being best heard in the fourth interspace of the right side, two inches from the middle line. The urine exhibits an abundance of phosphates.

A note was made regarding his cough and expectoration. When walking about the ward his cough was not at all troublesome, but the discharge from the sinus was increased, whilst the expectoration diminished. On the other hand, when he went to bed, the moment he assumed the horizontal attitude his cough returned, and he was at times almost choked by copious expectoration, whilst the sinus ceased discharging.

After consultation, it was decided to perform an operation for his relief.

Operation. October 25, 1893. Chloroform was administered with extreme difficulty. The cough was almost constant, and with it expectoration. The moment the anesthetic was pressed far enough to abolish the excitability of the air passages he became cyanosed, apparently because of the muco-purulent material collecting in the trachea. The operation, therefore, was proceeded with without complete anesthesia; the patient

struggled considerably during the incisions, but he afterwards stated that he was unconscious of pain.

An incision almost vertical (there was a slight degree of obliquity from above, downwards, and inwards) was made in the anterior axillary line, from the upper border of the fourth rib to the lower border of the ninth rib; the edges of the wound were then held aside by ligature retractors. The sixth and seventh ribs were bared of periosteum for three inches of their length; they were partially severed by a Hey's saw, and the division completed by means of bone pliers. Two inches of each rib were removed. The bed of the sixth rib was then incised, and a director thrust through into the empyema cavity. This was followed by a sequestrum forceps, which was opened, and the thickened pleura being thus freely opened a large quantity of putrid pus escaped.

The patient's pulse, which had been very feeble up to this stage, improved, and the breathing became quiet. The extraordinary thickness of the seventh rib is worthy of note. It was fully as thick as the mid-portion of an adult ulna, and was rounded and quadrilateral in shape.

The finger was now passed into the abscess cavity. The extent downwards was, to the diaphragm, about a finger's length; not quite as deep forwards to the mediastinum. The lung could be felt high up, just within reach of the finger. The upper limit of the abscess posteriorly could not be determined.

The pleura was freely incised throughout the entire length of the opening afforded by the exsection of the ribs; and thus a large drainage opening was established. The cavity was washed out with 1-20,000 perchloride of mercury, and a tracheotomy tube was fixed in position. A dressing of absorbent wool was applied.

October 30th (five days after operation). The patient feels much better. Cough much diminished, and expectoration not one-fifth of what it was before operation. His appetite is good.

He continued to improve uninterruptedly. He gained 21 pounds in as many days. The discharge diminished, the cough almost entirely disappeared. The cavity closed below the opening, so that now the probe will not pass in that direction. The probe still passes upwards, however, for a very considerable distance. The man has no cough now, and his general condition has improved tremendously.

CASE OF PRIMARY DIPHTHERITIC LARYNGITIS.

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WITH reference to the much-discussed question of the etiology of membranous croup, a recent case in Victoria Hospital may be of interest.

Tommy B., æt. 4 years, was admitted on Sunday evening. The mother said he had been croupy since the previous Thursday. The dyspnea was fairly constant, but at times there was paroxysmal increase of the difficulty. There had been no sore throat in the family, or amongst the neighbors. The other children were well.

The child's throat and nose were examined, and no trace of membrane or exudate discovered. Temperature, 100.2°. Child seemed drowsy.

On the morning of the same day a case of catarrhal laryngitis had been admitted, and the appearance of the two cases had very much in common. The patient was therefore put to bed in the same ward, given a purge, and allowed to breathe in warm and moistened atmosphere until the morning visit. During the night the dyspnea suddenly became much increased, and before the house surgeon reached the ward the child was dead.

A complete examination was not permitted, but the larynx and a portion of the trachea was removed. The nose and throat were carefully examined, but no trace of membrane was discovered. The larynx, seen from above, showed the rima glottidis filled with pulpy, grayish-white exudate, which seemed to well up between the cords.

On opening the larynx, a pseudo-membrane was found lining the entire larynx, and extending about an inch down the trachea. The exudate covered the lower and inner surfaces of the valve cords. It was thicker above than below. When stripped up, it left a smooth, glistening surface beneath, and formed a perfect cast of the larynx. The trachea, except the portion directly below the larynx, seemed quite clear.

Microscopical examination of the membrane by Dr. John Caven, the pathologist of the hospital, discovered numerous rod-like bacilli answering to the description of the Klebs-Loeffler bacillus, besides numerous streptococci and clusters of micrococci.

The diagnosis *post mortem* was diphtheria. Subsequently, cultures were made from the membrane which proved the rod-like bodies to be the specific germ of diphtheria—the Klebs-Loeffler bacillus. Unfortunately, owing to the sudden death of the child a few hours after admission, neither the condition of the reflexes nor the character of the urine was ascertained. In all probability there would have been albuminuria, with loss of knee-jerk. In the associated case—which recovered in a short time—the urine remained normal, and there was no loss of reflex.

The other children remained well, although one slept with the patient during the time he was ill.

Here, then, was a case which, in the absence of *post-mortem* examination, might have been classed as simple croup in catarrhal laryngitis, but was, in reality, primary diphtheria of the larynx. The history shows, too, the necessity of exhausting the means of diagnosis in every case.

The cause of death was the filling up of the larynx with membrane, with, perhaps, the additional element of the induced spasm.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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BRONCHIAL SEPTICEMIA IN INFANTS.

Drs. Hutinel and Claisse have published observations on a form of acute septicemia observed in young infants, which they believe to be due to rapid infection of the bronchial mucous membrane by micro-organisms derived from lesions in or about the mouth or pharynx. The cases occur frequently as complications of measles, but sometimes arise independently. They are particularly likely to arise in hospital wards, when an extensive epidemic of measles has led to crowding. The infant, without obvious cause, becomes rapidly extremely ill, the face is pale, and of a leaden color, the eyes sunken, the cheeks blotched with red, the expression anxious, the alæ nasi work, respiration is hurried, the pulse rapid (150 to 180), and the temperature rises quickly to 104° F. Auscultation reveals numerous sub-crepitant râles; there may, however, be no dullness, and the extent of lung occupied by râles may be no greater than a few days earlier, when the patient did not appear very ill. Vomiting and diarrhea of gray-green stools may be present. In a large number of such cases an infective process may be observed on the lips—cracks with a grayish bottom and indurated surface, especially on the upper lip. From these cracks a superficial serpiginous ulceration extends; the lower lip is excoriated and covered with pultaceous sordes. The buccal mucous membrane is red and bleeds easily, the pharynx is red, the tonsillar crypts are filled by a creamy exudation, the nose runs, and the discharge excoriates the upper lip. The prognosis is exceedingly bad. In a considerable proportion of such cases no pneumonia is found after death. The mucous membrane of the larger bronchi is inflamed, and this inflammation may extend to a greater or lesser distance toward the smallest bronchi, which, however, are

not uniformly affected. The liver is enlarged and presents fatty degeneration, affecting especially the portal side. Bacteriological examination of the contents of the bronchioles showed that a streptococcus was present in every case but one, and generally in large numbers, sometimes in pure culture. In one case the pneumococcus was present alone; in others the streptococcus was associated with staphylococci or the bacillus coli. The streptococcus was in an extremely virulent state. In three cases only was the streptococcus found in the blood, and the pneumococcus once. As a rule, the bronchial glands, liver, kidneys, and spleen contained no microbes. The symptoms, the authors conclude, are produced by the absorption of soluble poisons elaborated by the streptococci in the bronchi and bronchioles.--*Revue de Médecine*.

THE MODERN DIAGNOSIS AND TREATMENT OF DIPHTHERIA.

Whatever else sanitation has done, it has not yet succeeded in checking the prevalence of diphtheria either in city or town. The disease is still the scourge of childhood, the dread of parents, and the reproach of medical art. For the recent practical application of bacteriology to the diagnosis of diphtheria has revealed in a very startling manner these two facts: First, that in over one-third of the cases the disease diagnosticated as diphtheria was not the genuine malady at all; second, that the mortality-rate of true diphtheria is between forty and sixty per cent. All the numberless contributions to diphtheria therapeutics which have been made so industriously for fifty years must be thrown aside as valueless, or nearly so. For we know that all the gentlemen who have reported a "new treatment" of diphtheria, with a trifling mortality-rate, have simply not been treating true diphtheria at all. Diphtheria diagnosis and diphtheria therapeutics have got to be started over again on a new basis, viz., that of bacteriology. The admirable work of our City Board of Health has already shown the need of this new work, and its brilliant promise for the future. Dr. F. H. Williams, of Boston, has also called attention to it in an address delivered before the Massachusetts Medical Society (*American Journal of the Medical Sciences*, October, 1893). Dr. Williams gives the results of his clinical and bacteriological work in diphtheria at the Department for Contagious Diseases of the Boston City Hospital. His figures show very much the same thing as do those of the New York City Board of Health. In other words, in Boston as well as New York, only about one-half of the cases diagnosticated as diphtheria are really such; the mortality is very low in pseudo-diphtheria and very high in true diphtheria associated with the Klebs-Loeffler bacillus. To Dr. Williams belongs the credit of making some quite extended studies of the therapeutics of true diphtheria.

Dr. Williams first of all destroys some of the fetiches of the past. Iron, for example, he does not find often indicated in many cases. Among nineteen cases there was one hundred per cent. of hemoglobin in sixteen. The tincture of iron he found useful mainly on account of the free hydrochloric acid. Weak solutions of this acid in water answer just as well. He says: "Chlorate of potash does not seem to me of service, and in excessive doses may do serious harm. Nitrate of silver is a caustic that does not penetrate deeply. Chromic acid is one of the most relentless of all caustics. Iodine is irritating when inhaled, as are the vapors from saturated solutions of chlorine. Solutions of carbolic acid are poisonous and inefficient as germicides. I have not succeeded with digestives." The action of corrosive sublimate is only inhibitory, not germicidal, and it is often futile. Dr. Williams finds in peroxide of hydrogen the most active, and, at the same time, the least harmful, of germicides. This substance must be used, however, in strong solutions, *i.e.*, twenty-five or fifty volumes. The advantages of these are that they are good germicides, and are not poisonous nor harmful to the mucous membrane; they cleanse a foul throat and break up and disintegrate certain portions of the diphtheritic membrane, thus rendering the bacilli more accessible. They likewise assist in diagnosis, for when the hydrogen peroxide, even in weak solution, is applied to the throat where there is any trace of membrane, it causes it to assume a white color from the presence of fine foam, which is made by the liberation of the oxygen gas. It thus becomes a useful agent in detecting spots of membrane earlier than they would be apparent in any other way, and thus indicating the areas to which the treatment should be directed. With this end in view, the throat may be sprayed or the mucous membrane may be swabbed with dilute hydrogen peroxide. It is known that corrosive sublimate, to a considerable extent, is inhibitory rather than germicidal in its action, but it would be difficult to conceive of a merely inhibitory action on the part of hydrogen peroxide, as this substance is so readily decomposed.

No rule can be given for applying these solutions that will cover all cases. In a general way it may be said that the strong solutions of hydrogen peroxide containing about one-half per cent. of acid, made up chiefly of hydrochloric or sulphuric acid, should be gently but thoroughly applied every four hours during the night, and more frequently during the day for the first few days. The 25-volume solution may be used in spray; the 50-volume may be applied, a drop or two at a time, on a swab, until the membrane is removed or much diminished, or in certain cases the 50-volume solution may be applied with the syringe. Even a stronger solution than fifty volumes may be used for resistant membranes. It is well to use cocaine before applying the peroxide. By the help of bromide at

night the patient loses very little sleep in being aroused for the local treatment. Every precaution should be taken to spare the patient's strength, and it is not necessary that the head should be raised from the pillow while the applications are being made.

There are some disadvantages to the peroxide treatment which are enumerated, and the limitations of it, and indeed of all local and late treatment, are dwelt upon. Still, by means of peroxide of hydrogen in strong solution, applied early and judiciously, it seems probable that the mortality-rate from true diphtheria may be reduced much below forty per cent. Of fifty-eight cases treated by Dr. Williams sixteen died, and among these the mortality was in some cases explained by incomplete or late application of the germicide.—*New York Medical Record*.

SUPRACLAVICULAR INSPIRATORY DEPRESSION IN EARLY PHTHISIS.

Dr. Revillet once more draws attention to the above phenomenon. Practitioners know how difficult the diagnosis of early phthisis may be, and how important it is to have this point clearly settled. The search for bacilli in any sputa that may be expectorated is, in suspected cases, helpful. But one may have to wait a long time before any micro-organisms can be detected. In like manner, dullness on percussion and crepitation may be absent, and we have to rely on the presence of such delicate signs as rough, feeble, and wavy breath sounds in solving the problem. In weak girls the detection of feeble and staccato respiration at the apex may mean nothing; but, according to Dr. Revillet, if to such ambiguous signs is added unilateral inspiratory depressions of the supraclavicular fossa the presence of tuberculous pleurisy of the apex may be unhesitatingly affirmed, this sign being pathognomonic of the lesion. It may be absent, however, in cases of apical pleurisy where adhesions co-exist consecutive to diaphragmatic or parietal pleurisy, for in such instances the play of the apex of the lung is interfered with. In five *post-mortem* examinations of patients in whom, during life, this supraclavicular inspiratory depression had been noted, thick and tough adhesions of the corresponding apices were observed. In two instances atrophy of the platysma myoides and of other muscles of that region was observed. If, in such a case, traction is made on the lung from below, the phenomena may be easily reproduced. It must not be forgotten that evident signs of early phthisis may be masked by the râles of bronchitis, and here, again, Dr. Revillet's sign may prove to be of use. When the tuberculous process is more advanced both apices become attacked, and the sign loses its significance; but in this case, again, the greater amplitude of the depression at one apex enables the medical attendant to say that that apex was the first attacked. In a

period of four years Dr. Revillet has proved in the *post-mortem* room that these apical adhesions may disappear ; and, in fact, this observer tells us that, as the tuberculous deposit may be limited to the pleura, and as, moreover, these adhesions may be absorbed, a comparatively favorable prognosis may be made in these cases. Of twenty-six cases kept under observation during four years, only one terminated fatally, the rest remaining *in statu quo* or becoming only very slowly worse.—*La Semaine Médicale*.

INSURANCE OF OPIUM USERS.

Perhaps the most important evidence secured by the British Parliamentary Commission appointed for the purpose of investigating the opium question is that tendered by the management of the Oriental Life Assurance Company, which possesses what may almost be described as the monopoly of the native business of India. According to the testimony of the directors of that institution, no extra premium is charged to users of the drug, and this estimate of the risk seems to be confirmed by the surprising fact that during twenty years not a single claim has been paid for death which could be attributed to the use of opium.—*The Tribune*.

NEURECTOMY IN SPASMODIC TORTICOLLIS.

Gardner and Giles, in a paper on neurectomy in spasmodic torticollis and retrocollic spasm, report two cases, one of spasmodic torticollis, the other of retrocollic spasm without torticollis, which were treated by exposure and partial resection of both spinal accessory nerves and subsequent division of the posterior branches of the second and third cervical nerves. This treatment was completely successful in the first case, nearly five years having elapsed since the last operation. In the second case it was followed by cessation of all bad symptoms, save some trifling spasmodic movements of the deep rotators of the left side, which, it is anticipated, will be completely cured by another operation. Gardner, who had charge of these cases, claims precedence over Keen with regard to section of portions of the posterior branches of the second and third cervical nerves, having performed this operation a few months before it had independently been thought out and practised by the latter surgeon.—*New York Medical Record*.

THERAPEUTICS

IN CHARGE OF

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THE VALUE OF CREASOTE IN GASTRIC FERMENTATION.

Creasote has been so largely used within the last few years in the treatment of bronchial or general pulmonary disease that many of us have forgotten the valuable results to be obtained by its employment in the treatment of gastro-intestinal troubles associated with fermentation. As is well known, the name of the substance is derived from the fact that it was found to prevent decomposition of nitrogenous matter, and that it therefore acted as a distinct antiseptic. There are two classes of cases of indigestion or disorder in the alimentary canal in which creasote is of great value. Aside from those instances of persistent vomiting where by its local action it often renders us great service, it is also useful in those cases of fermentation or chronic indigestion in which there are formed large quantities of flatus some time after eating. Whether the distention is caused by the fermentation of starches or the decomposition of nitrogenous materials, a minim or two of creasote half an hour or so after eating, or immediately after eating, will often help such cases. Another instance in which creasote is of value is in a case of severe acute gastro-intestinal fermentation, which is often manifested, in the more severe cases, by an actual attack of cholera morbus. The administration of creasote in such an instance not only tends to prevent the vomiting, but to inhibit the production of poisonous products which are developing from the bad food that the patient has been unfortunate enough to take. Here, again, the dose of from one to three minims of creasote, well diluted, proves of value. In those instances in which the vomiting is too intense to permit the swallowing of much liquid, it may be administered in the dose of from one-half to one minim in a tablespoonful of water, milk, or brandy, a few drops of this mixture being given at a time. Notwithstanding the laudatory statements which have

been made as to the value of thymol, naphthaline, and other gastro-intestinal antiseptics, we believe that creasote is the best one which we can employ, and we doubt, if it is administered carefully, that it is as apt to produce disturbance of the digestion by irritation of the mucous membrane as some of the more highly praised and more expensive remedies. It is hardly necessary to add that it is important to use the beechwood creasote, and not that derived from the mineral kingdom.—*The Therapeutic Gazette*.

THE PHARMACOLOGY OF THE NITRITES AND NITRATES.

Under this interesting title, Professor Leech delivered the Croonian lectures for 1893 before the Royal College of Physicians, and the following summary, which formed a leading article in the *Lancet* for July 22nd, 1893, will prove of interest to our readers:

Although the first two Croonian lectures, which dealt with the pharmacology of the nitrites and nitrates, contained the results of a large amount of labor and of close experimental research, the third and fourth lectures are, we venture to think, more likely to be of value to busy practitioners, since they deal mainly with therapeutic considerations. While laying due stress upon the various conditions in which the nitrites and nitrates may be of service, Professor Leech does not hesitate to indicate clearly their limitations, even though he thinks that they are too often discarded through excess of caution. In their favor he points to the small quantities necessary to influence the vascular system, to the relative absence of risk unless employed with suicidal intent, and to the evanescent action. After referring to the broadness of the definition of angina pectoris adopted by Sir Richard Quain, he maintains that, according to clinical experience, this condition is always associated with a rise in tension due to temporarily decreased calibre or either systemic or pulmonary vessels, and that the symptoms are the outcome of the heart proving unequal to the work it has to perform. The theory that the relief due to the administration of nitrites is the result of true analgesic action is not supported, the reduction of tension, as originally held by Dr. Lauder Brunton, being maintained as the true explanation. On account of their rapidity of action he prefers the nitrites of the fatty series, which can be employed by inhalation, but he considers that experience has shown that later attacks are of longer duration, and that, although inhalations are beneficial in earlier attacks, they may frequently have to give place to remedies of more prolonged activity, such as nitro-glycerin. Nitrite of amyl, as is well known, is not a stable compound, and it may on that account fail when it is given in solution, although a disappointing result may sometimes be due to the short duration of its period of action, or to special insusceptibility of the individual. On

the other hand, Professor Leech records many cases in which it has been found expedient to largely exceed the Pharmacopeial dose of the liquor trinitrini, and it is noteworthy that in his experience it is far safer to employ somewhat large doses of nitro-glycerin than to resort to injections of morphine. Ethyl nitrate has scarcely been sufficiently employed in angina pectoris to warrant any very definite conclusions, but it appears to exert a more powerful and more persistent influence in reducing tension than that possessed by ethyl nitrite. Although the nitrates of propyl, isobutyl, and isoamyl are as effective as the nitrite of ethyl in lowering tension, they cause so much headache that they have not been employed medicinally. It must not be forgotten that the influence of nitrites and nitrates upon angina pectoris is palliative rather than curative, and that they should therefore be used concurrently with such remedies as iodide of potassium and arsenic.

Paroxysmal cardiac dyspnea may be relieved by the action of the nitrites on the pulmonary system of vessels as well as on the systemic system, but the ordinary shortness of breath consequent on exertion, which is so frequently met with in simple valvular lesions of the heart, seems to be unaffected by them. On the other hand, Professor Leech is convinced that some good and no harm has resulted from the use of nitrites in cardiac failure or in syncope such as that occurring during the administration of chloroform. Of the value of this group in asthma and bronchitis there can be no doubt, but the rationale is not easy to explain. It is possible that asthma is not the result of simple bronchial spasm, but that there may also be, as has been suggested by Sir Andrew Clark, some hyperemia or tumidity of the bronchial mucous membrane, and that the influence on the pulmonary vessels may also relieve the bronchial vessels. Whatever explanation is adopted, testimony is largely in favor of using nitrites in many of those cases which are ordinarily treated with ammonium carbonate and ether. In uremic dyspnea and in migraine the results are disappointing, but the converse holds good for the treatment of forms of headache associated with high tension. The value of the series in tetanus, strychnine poisoning, and epilepsy is open to considerable doubt, notwithstanding the favorable statements which have previously been made. In the treatment of acute Bright's disease there is also great lack of certainty of the efficacy of the nitrites; although diuresis has appeared to be hastened by the administration of nitro-glycerin or sodium nitrite, headache and other discomforts have been relieved by them, and they certainly have the advantage of causing no ill effects. Similar difficulties attend the estimation of the results in cases of large white kidney and in mixed forms of chronic nephritis, but in dyspnea and cardiac failure of late stages of contracted kidney nitro-glycerin adds to comfort, and perhaps tends to prolong life.

Among other practical points may be noted the remarks upon the official compounds. On account of the decomposition of nitro-glycerin in presence of any salt, it is better to employ the tabellæ, or else a simple dilution of the liquor trinitrini with distilled water. For subcutaneous injection, in the rare cases where inhalation of amyl nitrite fails, nitro-glycerin is better than sodium nitrite. The benefits of spiritus etheris nitrosi have depended upon the proper proportion of nitrite of ethyl, and lack of appreciation of this fact appears to be largely the result of the rapid decomposition which occurs on mixture with water; hence the valuable recommendation that the dilution should be effected only at the time when this drug is required. It is curious, however, to learn that this decomposition is retarded or prevented when solutions of acetate or citrate of ammonium are mixed with the spirit of nitrous ether. This combination has so long found favor with practitioners that it is comforting to know that their faith was grounded, even though unconsciously, upon sound scientific foundations.—*The Therapeutic Gazette*.

A SUGGESTION FOR THE TREATMENT OF SKIN DISEASES.

Dr. Alston, of Trinidad, is the inventor of an ingenious and possibly effectual plan of securing the entrance into the diseased integument of medicaments destined to combat the ravages of the parasite of tinea tonsurans. His idea, which he is unfortunately debarred from putting into practice owing to the scarcity of this particular parasitic disease in his parts, consists in the application over the affected area of a miniature air-pump *qua* cupping glass, the which would, it is conceived, withdraw the air from the skin, and render it more than usually porous. This having been done, and the cupping glass being retained *in situ*, the medicament is sprayed therein, to be greedily absorbed by the thirsty integument.

OBSTETRICS

IN CHARGE OF

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FEEDING DURING LABOR.

Dr. Gundrum, of California, publishes in *The Therapeutic Gazette* a paper on the subject of "Preparing delicate pregnant women for labor by proper exercise and food, and feeding at frequent intervals during labor." He refers to a case where a poor delicate woman went through twenty-eight hours of the severest physical exertion and suffering in her labor, during which time she took only two cups of tea and two crackers. At the same time the physician in attendance took his regular meals, and a supper during the night, besides considerable sleep, and, of course, "he stood the labor well."

In a second pregnancy, which commenced fourteen months after this labor, the patient was compelled to take regular exercise out of doors, and do part of the housework ; at the same time to take plenty of nutritious food. During labor, particularly during the latter half of the first stage, she received small amounts of egg-nog, or beef tea, or strong coffee with cream, every eight to fifteen minutes. At the end of labor the patient was almost as fresh as at its commencement, and she made a rapid recovery ; although after her first labor she was much exhausted, and had a very slow recovery.

He reports other cases of a similar character, and advises all practitioners to prepare their obstetric patients by a course of exercise and proper feeding. He says that patients during labor should, as a rule, be fed frequently and regularly with beef tea and egg-nog, or something of that sort. He says he is well aware of the fact that some authorities claim that beef extract or beef tea contains but little nourishment, but he claims to know by personal experience that a well-prepared beef extract will produce muscular energy, and will help a patient in labor by keeping up her strength, and increasing the power of the muscular forces, particularly those of the abdominal wall.

PUERPERAL SEPTICEMIA.

At a recent meeting of the London Obstetrical Society, an interesting discussion took place on the subject of puerperal septicemia. The president of the society, Dr. Herman, remarked that defective sanitary conditions are not matters of importance in the causation of puerperal disease, and is reported to have said "that he knew of no evidence that the relation between the drainage and the illness was anything more than one of coincidence." Dr. Cullingworth is reported to have said that "it is a very dangerous doctrine to propagate that puerperal septicemia could be caused by defective drains and sewer emanations. There was no evidence that would bear criticism in favor of such a view; and to preach such a doctrine was to divert attention from the point of real importance, which was personal cleanliness on the part of all around the patient." Dr. W. S. Playfair, in a letter published in the *British Medical Journal*, takes strong ground against these views, which he characterizes as extremely pernicious, and likely to do harm, in coming from men who hold such high positions as teachers of obstetrics. He quotes the history of a case which appears in his work on midwifery, which, as he considers, proves that a case of serious puerperal disease was produced by sanitary defects. On the eleventh day the patient left her bed, and was placed in a current of sewer gas and instantly poisoned. On the twelfth and thirteenth days she was again exposed to the same sewer gas, and more intensely poisoned. He goes on to show that there could not possibly be any flaw in the chain of evidence in this direction.

In the same connection Dr. Playfair made a statement which we cannot unreservedly accept. His words are: "For neither he (Dr. Herman) nor any one else, I believe, ever saw a case of septicemia from conveyed infection which did not commence before the twelfth day." Dr. Playfair, in his work on midwifery, says that phlegmasia dolens is a local manifestation of a general blood dyscrasia. By the term "blood dyscrasia" we understand that he means a septic and hyperinotic state of the blood; and we had supposed that this septic condition was due to conveyed infection, and that the symptoms arising therefrom appear in certain cases after the twelfth day. We do not, in making this comment, desire to throw any doubt on Dr. Playfair's opinion that in his case the puerperal disease was certainly due to the sanitary defects. Dr. Playfair goes on to say: "It will be observed that I have been careful to talk of defective sanitation as a cause of puerperal disease. I am quite prepared to see it proved that such disease is distinct from septicemia. There are more things in puerperal disease than are dreamt of in our philosophy, and the whole subject is too much in its infancy to justify very dogmatic assertions

with regard to it. For aught I know to the contrary, it may yet be shown that the two types of disease are as distinct as typhus and typhoid fevers. All I can say is that hitherto I have not been able to distinguish them, and, therefore, in my book on midwifery I have described them both under the head of 'puerperal septicemia,' and I have never been able to see why infective germs suspended in the atmosphere should not be as dangerous as analogous germs on the hands."

THE REPLY OF DRs. HERMAN AND CULLINGWORTH.

Drs. Herman and Cullingworth published in the *British Medical Journal* a joint letter in reply. They say that they do not think that defective sanitary conditions are not matters of importance, and they have no doubt that defective drains may make puerperal women ill, just as they make any one else; but they do not think that such conditions cause puerperal septicemia. They agree with Dr. Playfair in thinking it not only possible, but probable, if not certain, that the disease caused by sewer gas is distinct from septicemia. They will not undertake to furnish Dr. Playfair with a differential diagnosis between sewer-gas poisoning and septicemia, because the effects of the former are little understood. Many kinds of illness are put down to it, but they know of no set of definite symptoms that has been proved to be a regular effect of sewer-gas poisoning. The phenomena of septicemia, on the other hand, are uniform and well marked, whether it occurs after a delivery, or after a surgical operation. They also add that it is a striking fact that one never hears of septicemia being produced by sewer-gas poisoning except in the case of puerperal women.

They acknowledge the ability which has been displayed by Dr. Playfair in his papers on this subject; but differ from him chiefly with reference to his method of investigation, which, they say, is by applying to individual cases a very imperfect method of exclusion. A patient gets what appears to be septicemia, a search is made for some source of septic infection, the source is not found, and it is assumed that therefore none existed, and that the disease must have been due to some other cause. Some fault is discovered in the drainage, or there is a case of scarlet fever in the next house, and, as the case *cannot* be septicemia (no source of infection having been found), the drains or the scarlet fever *must* be the explanation. They think this mode of investigation is fallacious.

They still adhere to the correctness of the statement that it is a dangerous doctrine to propagate that puerperal septicemia could be caused by defective drains and sewer emanations. They consider that the returns of the Registrar-General show that the medical practitioners of Great Britain have not yet generally adopted the use of antiseptics in their private

practice ; and they consider that anything that gives medical men a ready excuse for not adopting them, and a ready way of accounting for any case of puerperal disease that may occur in their practice, is rightly stigmatized as dangerous.

CORROSIVE SUBLIMATE IN MIDWIFERY.

At the present day probably corrosive sublimate is the favorite antiseptic in midwifery practice. Dr. Illingworth, in a recent letter to the *British Medical Journal*, recommended solutions of the biniodide of mercury as superior to bichloride in obstetric practice. Dr. Boxall replies in the same journal, and emphatically endorses the use of bichloride, and discusses certain of the objections of those who are opposed to it.

Tarnier, who had used it for several years, is said to have discontinued it, at the same time denouncing it as too dangerous. Dr. Boxall, in reply, says that Tarnier denounced it as dangerous *for intra-uterine injections*. Probably the great mass of those who use the bichloride will agree that its injection into the uterus is a source of great danger ; but they are not inclined, on that account, to discontinue its use in cleansing the hands of the accoucheur, as well as the body, especially the vulva, of the patient.

Dr. Boxall considers that, in spite of its drawbacks, the bichloride has given the best results up to the present time. He has watched carefully, in hospital practice, the results when using other disinfectants ; and compared them with his results under the routine employment of the sublimate, and has found that the latter is much superior to phenol or Condy's fluid.

He concludes that for external purposes, such as disinfecting the hands, the use of the sublimate is attended by no danger. He also thinks that the sublimate may be safely used as a douche before delivery ; but he is opposed to sublimate douching after labor unless done very carefully by a doctor who recognizes the dangers and understands the means of preventing them.

Of course, we must remember that certain pathologists, such as Welch and others, have concluded, after careful laboratory work, that the sublimate, on account of its chemical affinities, is practically useless for the purposes of disinfection in surgery and obstetrics. When clinical experience is not in accord with scientific demonstrations, we may hope that time will bring sufficient light to make all things clear ; but, in the meantime, the writer will not despise the results of the former.

SURGERY

IN CHARGE OF

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THE CAUSE OF DEATH AFTER BURNS.

Salvioli (*Centralblatt für Chirurgie*, January 28, 1893) says that the cause of death after burns is due largely to the involvement of the blood vessels in the different organs. According to Bizzozero, the great increase of blood plates in the normal circulation is essentially the result of burns. When the mesenterium of mammals is examined microscopically, and then heated to a temperature of from 50 to 55 C., it is noticed that the flow of blood becomes quickened, and that the blood plates collect along the walls of the vessels and cause the formation of white thrombi. These, in turn, are torn loose by the blood stream, and as a result we have an enormous number of emboli. In certain cases, and especially when considerable heat has been applied, the blood does not circulate. This condition of stasis is partly due to thrombotic and embolic conditions, which stop up the arteries; partly to contraction of the arteries; and, lastly, to a change in the red blood corpuscles, which become sticky and hang together, and thus hinder the blood flow. After death, numerous emboli are found in the lung parenchyma and many blood-plate thrombi in the vessels. To prove that these results are due to the increase in number of the blood plates, we have only to defibrinate the blood, and the application of heat will produce but little effect. In performing this experiment, it is necessary to remove a large quantity of blood defibrinate by whipping, filter, and again inject into the animal. This should be repeated ten times in two hours. Through this process the blood loses its power of coagulation, and is poor in blood plates. Before this procedure, one plate to thirty-five corpuscles was counted; after it, one in two hundred and seventy.—*Omaha Clinic.*

A NEW METHOD OF CHECKING BLEEDING AFTER TONSILLOTOMY.

Dr. R. H. Dawbarn (*Pacific Record*) recommends a simple means of controlling this form of hemorrhage, which, while it is rarely fatal, occasions much anxiety to the patient, if not to the physician himself.

Briefly, it consists in surrounding the bleeding surface with a stout purse-string ligature, of silk or catgut, which when tightened is entirely hidden in the tissues about the tonsillar stump.

The surgeon selects a large needle, preferably semi-circular in shape, and a needle-holder. The mouth is held open by a cork between the back teeth. Four stitches are now introduced. Less than two minutes is needed for this.

When the free ends are drawn upon, the loops, of course, disappear. The ligature is now tied tightly enough to stop bleeding, and the ends cut moderately short. The thread may either be left to slough out, or, and probably preferably, may be cut and removed in twenty-four to thirty-six hours.

As to the distance to which the needle penetrates, the two transverse strokes may enter to about one-quarter inch in depth. The two vertical ones, running parallel with the carotids, could, if desired, probably be passed with safety rather more deeply; though there would seem to be no special advantage in this.

It is not necessary to include the pillars of the fauces in the grasp of the thread. The two vertically placed stitches run, of course, very near the pillars, but not really in their substance.

Regarding the source of hemorrhage after tonsillotomy, of one thing we can be certain, namely, that it never comes from either of the carotids. The external and internal carotids are very nearly equidistant from the tonsil, and behind it; the nearer, the internal, being rather more than half an inch away (1.5 ctm.); the external being, say, three-quarters of an inch (2 ctm.). If a tonsillotome be used, cutting either of these vessels is a mechanical impossibility.

At least six arteries supply the tonsil; all being branches, indirectly, of the external carotid. Of these the largest, as a rule, are from the ascending pharyngeal, and the ascending palatine.

Fatal bleeding from tonsillotomy is practically unknown. But bleeding to the verge of syncope, long continued, and severe enough to alarm most seriously the relatives and friends, if not the doctor—this is not so rare by any means. In such cases (in addition to nearly a dozen lesser mechanical devices) even ligation of one or another of the carotids has been advised, and actually practised; although of these vessels tying the external carotid alone would seem rational; and that, too, only at a point

between its first two branches—the superior laryngeal and the ascending pharyngeal.

However, with such certain, safe, and easy device at hand as that which has been described, so severe a measure as cutting down and ligating a carotid can never be needed. Indeed, it would seem wisest to use the buried tonsillar ligature without waiting and wasting time and blood while trying less sure plans.

The nearest approach to this idea which the writer has anywhere found is a method suggested by Dr. E. W. Clark, of New York, who has run two large needles through the bleeding base, and, leaving these in place, wrapped a ligature firmly around them. Manifestly, even if this were equally certain in effect, it would be quite as difficult to do as the writer's device, and must be much more annoying to the patient while in position. Indeed, the side of the tongue would be likely to be lacerated against the sharp needle ends unless, in some way, these were covered.

The suggestion has also been made to seize with a volsellum forceps the bleeding surface, and, drawing firmly upon it, tie a ligature about it. I have in one instance tried this, and found the ligature repeatedly slipping off in spite of my best efforts. Indeed, as there is nothing like a stump or pedicle left (if the tonsillotomy has been properly performed), such slipping is almost unavoidable.

I only mention this latter plan as being the other of the two which remotely resemble the method upon which this paper has been written.

THE PRESERVATION OF CATGUT LIGATURES.

Catgut is in many respects so convenient a material for the ligature of arteries that if it could be relied on as being free from septic contamination it would still be preferred by many surgeons to any other kind of ligature; moreover, it is desirable to have at hand a ligature which can be kept ready for immediate use without further preparation. The preservation of catgut in carbolized oil is generally recognized as being untrustworthy and objectionable; it seemed, therefore, to be worth while to ascertain whether this ligature could be kept in some convenient and reliable anti-septic solution whence it could be taken ready for use. I therefore asked Dr. Charles Slater whether he would be kind enough to submit to bacteriological examination some specimens of sulpho-chromic catgut in solutions prepared for me by Mr. Montague, of the firm of Messrs. Wright & Co. These were as follows: (a) Sulpho-chromic catgut, No. 4, placed for forty-eight hours in a 10 per cent. solution of carbolic acid in glycerine, then for five hours in a $\frac{1}{2}$ per cent. solution of chromic acid in water, and finally preserved in absolute alcohol. (b) Sulpho-chromic catgut,

No. 4, preserved in a solution of one part of carbolic acid in twenty parts of absolute alcohol. (*c*) The same quality of catgut preserved in a solution of one part of carbolic acid to twenty parts of distilled water. (*d*) The same catgut preserved in a solution of one part of carbolic acid to forty parts of distilled water. (*a*) had been kept for three years; (*b*), (*c*), and (*d*) for rather more than one year. It was observed from Dr. Slater's experiments that (*a*) and (*b*) were neither of them free from contamination, but that both (*c*) and (*d*) were absolutely sterile; that is to say, sulpho-chromic catgut kept in an aqueous solution of carbolic acid (1 in 20 or 1 in 40) is aseptic, and can be used without further preparation. Catgut thus preserved remains strong (according to Dr. Slater's experiments as to its breaking strain), pliable, and smooth; it is easily tied, and remains sufficiently long unabsorbed. Embedded in the tissues as a suture, I have found it at the end of a fortnight to be practically unchanged.

The catgut in (*a*) and (*b*) (alcoholic solution) was hard, less pliable, and not easily tied with security. Of the two specimens in solutions of carbolic acid, that in the stronger solution (1 in 20) was found to be the firmer and more inelastic. This is, therefore, the most appropriate of the solutions experimented with, and from it a ligature can be taken ready for use without any further treatment.—*Lancet*.

CHANGES IN THE TESTICLES OF AGED PERSONS.

Dr. Joseph Griffiths, F.R.C.S., at the end of an interesting paper on "The Structural Changes Observed in the Testicles of Aged Persons," summarizes the following conclusions:

In the testicles of the aged, two distinct stages may be recognized in the process of involution or decay to which they are liable.

In the *one*, the epithelium of the seminal tubules, and also that of the tubules of the globus major of the epididymis, undergoes, more or less, complete fatty degeneration and partly disappears, the tunica propria of the tubules of the testicle becomes somewhat thickened, but the intervening intertubular connective tissue remains practically unaltered. In the epididymis the muscular wall of the tubule is replaced by fibrous connective tissue, and the intertubular connective tissue is increased, dense, and fibrous. In the *other*, or *second stage*, the seminal tubules are much reduced in size, the epithelium having in great part disappeared, leaving only, in many instances, a single layer of long, tapering, columnar cells, lining and filling the tubule, the central spermatozoa-producing cells having completely disappeared, while the tunica propria is greatly thickened from proliferation of its own connective-tissue cells and the formation of a fibrous matrix. The intertubular connective tissue is, in this *second stage*,

relatively increased, owing perhaps to the diminution in the size of the seminal tubules, but it still remains of loose texture, and contains, as in the normal, many connective-tissue cells. The epididymis shows no other changes than those incident to the *first* stage.

Besides the above, there is a *third* change which is more partial, and much resembles the result of that inflammatory process. It is usually observed in the small or shrunken testicles of old men, and affects both organs. In the altered patches, the seminal tubules, in the majority of instances, are completely transformed into fibrous rods or cords; but in some there still remain in the central fissure that represents the original lumen traces of epithelial cells derived from the degenerated cells of the seminal tubes. The intertubular connective tissue is increased in amount, and converted into a dense fibrous variety.—*Journal of Anatomy and Physiology*.

TREATMENT OF BRAIN INJURIES.

As yet, antiseptic surgery is attempted by the many, and asepsis by the few. It is well, therefore, to keep before us the fact that all tissues do not equally resist the action of antiseptic solutions. From an article in the *Deut. Med. Woch.*, an abstract of which appeared in the *Pacific Medical Journal*, we quote the following:

Physiological investigations have shown that the brain is extremely sensitive to chemical irritants, and some experiments have been recently made to determine the action of antiseptics upon the cerebral tissue. It was found that carbolic acid in strength above 1 to 200 speedily produced death. Corrosive sublimate always inflicted severe injury upon the brain tissue, even as weak as 1 to 10,000. Boracic acid in 3 per cent. solution was found to be absolutely devoid of injurious effects. The deductions from these experiments are that the use of carbolic acid and bichloride of mercury should be avoided in cases of wounds of the brain.

THE TREATMENT OF PERFORATIVE PERITONITIS.

There has recently been a case under care in London which shows a continued advance in the surgical treatment of peritonitis due to the perforation of an ulcer in the duodenum. These cases are of the most fatal kind, and death rapidly follows the intense peritonitis which supervenes on perforation in this situation. Abdominal section has frequently been performed with the view of arresting this fatal course; but we are not aware of any operation which has been completed by excision of the ulcer and suture of the wound thus made. It is usually very difficult to find the

point of perforation, and the surgeon has to be contented with washing out the abdominal cavity and leaving in a drainage tube, the opening caused by the perforation still permitting of the escape of bowel contents into the peritoneum. A young woman, a domestic servant, was suddenly seized with severe pain in the right hypochondrium at 7 p.m. on September 21st. Vomiting set in next morning, and she was then treated for intestinal obstruction by repeated enemata, etc. Becoming much worse, she was admitted to the Middlesex Hospital under the care of Dr. Cayley, who diagnosed perforative peritonitis. Twenty-six hours after the onset of the illness, Mr. Gould opened the abdomen above the pubes, and found the pelvic organs and the vermiform appendix normal, and the fluid that escaped from the peritoneal cavity acid in reaction. He, therefore, made another incision above the umbilicus, and found a small circular perforation in the anterior wall of the first part of the duodenum. This he excised, and closed the opening in the bowel by two rows of silk sutures and an omental flap. There was intense general peritonitis. The peritoneum was washed out with several quarts of warm boric solution and drained by a glass tube in each wound. About two pints of salt solution were injected into the left median cephalic vein. The patient died (from the peritonitis) ten hours after the operation. At the *post-mortem* examination it was found that the lesion had been entirely excised, that the wound was watertight, and that no other ulcer was present. There was intense general peritonitis. Had the case been treated immediately after the occurrence of the perforation, there is reason to think that a favorable result might have been obtained.—*Lancet*.

THE TREATMENT OF BURNS.

Antiseptic treatment, combined—when necessary—with skin-grafting, has done much to reduce not only the suffering, but also the deformity consequent upon this comparatively common and too frequently serious injury. In a recent paper, T. S. Morton (*International Journal of Surgery*) outlines tersely, but clearly, the more modern treatment of this class of cases. He says:

Burns and scalds, if of any considerable area, are attended by much shock and very low temperature. The paradoxical complaint of those severely burned is of intense cold. This is often, but not always, accompanied by agonizing pain. This shock should be relieved by the usual warm, external applications, and by the hypodermatic administration of such agents as atropia, digitalis, and brandy. Pain in this stage can best be relieved by subcutaneous doses of morphia; particularly should this agent be given in those cases where the burns extend over two-thirds of

the body, and death can be postponed but a few hours. In certain cases after reaction from shock is complete, and pain remains severe, it is well to induce full anesthesia while a thorough primary dressing is applied to all the injured parts. While under the anesthetic, the patient must be kept as warm as possible, and but a single part exposed for dressing at a time.

For the pain of less severe burns, nothing is so efficient as dusting the parts thickly with bicarbonate of soda, and upon this applying a plain gauze dressing wrung out of warm water. To preserve the required moisture of this dressing, rubber or gutta percha tissue should be bound upon the outside. This dressing should be left on but a few hours, or a day at the outside, when it should be replaced by some application which will render the parts sterile, and maintain them, as nearly as possible, in that condition. Or, if it is desired to at once proceed with the final dressing, a strong solution of the soda may be applied by immersion of the parts, or placing upon them of mops of absorbent cotton wrung out of the solution. Application, by the same means, of two per cent. solution of cocaine also answers this purpose very well. It is, however, but rarely necessary to apply either the soda or cocaine, as most burns, when they reach the surgeon, have passed the acutely painful stage, or have assumed an angry, suppurative condition from home treatment. In these latter cases, as well as in all where the pain is not very acute, the carbolic bath to be mentioned in connection with the dressing will exert ample analgesic effect to produce comfort.

When pain has moderated and shock has disappeared, the following is my customary procedure: All detached fragments of skin or other tissue are carefully dissected away, and the covering of any blebs is likewise removed. The parts are then immersed or bathed for ten minutes in a two and a half per cent. solution of carbolic acid. This accomplishes a double purpose: the burn and its surroundings are thoroughly sterilized, and the exposed or irritated nerve ends are benumbed into comparative insensibility. The carbolic solution has the additional advantage of sterilizing any fatty matters that may be upon the skin, and extends its antiseptic action down into the sudoriparous and fat glands. If any portions of clothing or other material adhere firmly to the burned surfaces, it is well to allow them to remain until thrown off upon the dressings. The soaking in carbolic solution will render all such sterile.

The injured regions are next subjected to a spray of full strength peroxide of hydrogen solution. This, with all detritus arising from its action, is washed away with salt solution (one drachm of common salt to the pint of water). The parts are now covered in completely with strips of Lister protective, which should extend for half an inch upon sound skin in all

directions. If extensive areas are to be thus covered, and expense is an object, gutta percha tissue may be substituted for the Lister silk protective, but the latter is far superior. Either of these protectives should be immersed for some moments in the carbolic acid solution before application. A copious dressing of sterilized gauze should next be neatly applied so as to well overlap the edges of the protective strips, and over this a thin layer of absorbent cotton is bound with moderate compression. If the burns have become very septic, it is well to apply the gauze wrung out of 1-4000 bichloride solution, and cover the dressing in with the rubber or gutta percha tissue to retain it in a moist condition. In either case the dressings should be renewed not later than every second day. Sometimes daily dressing of an originally very septic burn will be necessary.

Thorough spraying with the peroxide of hydrogen solution (diluted if its full strength application gives rise to pain), washing with salt solution, reapplication of the protective strips, gauze, and cotton, constitute the necessary steps in redressing until cicatrization is complete, or the surfaces are granulating and ready for skin-grafting. Bathing with the carbolic or 1-2000 bichloride solution may also be necessary until asepsis is perfect. Any sloughs that may form in the process of healing are apt to separate very slowly under antiseptic conditions, but their removal may be hastened by dissecting them out (cutting a little within the edges of the slough to avoid pain and hemorrhage).

Contraction is then much less extensive when burns have been treated antiseptically, but very large denuded areas in the neighborhood of joints, the neck, breast, or small surfaces near the mouth or eyes, are still liable to produce sufficient contraction to be undesirable. Much the same line of treatment is to be maintained until the entire surface is covered by healthy granulations, and epithelium has commenced to form on it. If, then, it becomes apparent that undesirable contraction will be inevitable, if the natural process of healing is permitted to continue, Thiersch's operation of skin-grafting must early be resorted to, and the denuded surface covered in, as much as possible, with new skin.

Where burns are situated near or in the flexures of joints, whether grafting is resorted to or not, splints should be applied to resist the tendency of the parts to assume a fixed position during healing. When several fingers or toes are burned, each one should be dressed separately, that the cicatrizing surfaces may not come in contact and permit two or more of the digits to grow fast together; here grafting is often of great utility.

In burns and scalds about the genitalia, nates, and portions of the face or ears, the protective and gauze dressing cannot always be well applied or kept in position. If it slips and permits the parts to become dry or

adherent to the gauze or bandages, more harm than good will result. In these regions we may be forced to rely upon some form of ointment. But, even under these circumstances, washing with carbolic or salt solution and spraying with the peroxide solution, with frequent change of dressings, will maintain the parts in a state of very fair disinfection, and largely abate odor, suppuration, and fibrous cicatrization. The preparation that has given me the most satisfaction for this purpose is the benzoated oxide of zinc ointment spread thickly upon lint, dusted with iodoform or aristol, and bound on with the usual thin layer of absorbent cotton. Or a mask of the spread and dusted ointment can be cut and simply laid upon the face, with openings for the mouth, nose, and eyes. Of the two dusting powders mentioned, aristol is much to be preferred because of its more active antiseptic and anesthetic powers, as well as its lack of odor.

In general burns, an air or water bed is almost essential for the comfort of the sufferer ; it also prevents pressure upon denuded parts and the formation of bedsores.—*Philadelphia Polyclinic.*

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

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VICTOR HORSLEY ON THE TREATMENT OF CEREBRAL TUMORS.

In the opening address in this section, Prof. Victor Horsley points out the futility of continuing mercurial treatment over a lengthened period, and urges early operation, either for the purpose of removing the growth or as a palliative measure. He agrees with Louis Starr when he says that "if mercury and iodide of potash fail to relieve in three months, or if within that time the symptoms rapidly increase, the operation is not to be performed." Only in the case of syphilitic or tuberculous growth is there the slightest chance of cure from mercurial treatment. Undoubted cases of tubercular nodules have recovered, but most frequently with blindness or defect, and after death the cicatrized nodules have been found.

Prof. Horsley leaves this part of the subject, and turns to the question of operation. "He would advise operation (*a*) for removal and cure of the neoplasm. Cure in the case of malignant growths cannot be expected except the operation be done at as early a period as it would if the tumor were in the leg, for example. Innocent tumors are more certainly cured by operation. Gummatic frequently give rise to a chronic and progressive meningitis, and this the author thinks can be prevented by operation at an early date for the removal of these growths. (*b*) Operation is strongly urged for relief of the classical symptoms of tumor, headache, optic neuritis, and eventually blindness, and vomiting. Prof. Horsley found that in every case where the skull was opened, no matter whether the tumor was removed or allowed to continue its growth, the headache was relieved, and in the case of the latter the relief from severe pain persisted until the patient's death. Regarding the optic neuritis, the effect of opening the skull was to at once diminish the swelling of the disc, and, if atrophy has not commenced, go on to complete recovery. With reference to vomiting, as soon as the tension is relieved it stops."

Opening the skull has the effect in many cases of, in some way, causing the growth to degenerate and disappear. This, Prof. Horsley observes, is in harmony with the well-known tendency of cerebral tumors to undergo degeneration. Such a result cannot be expected as likely to follow of necessity, but it is an argument in favor of deliberately opening the skull for the purpose of palliating a condition which cannot be cured.

Concerning the shock of operation, formerly many died, but this can now be wholly avoided by the simple expedient of doing the operation in two stages: in the first merely the exposure of the skull and removal of the bone.—*British Medical Association*, August, 1893.

ANTIDIPHThERIN.

Kunne (*Wien med. Blatter*, December 14th) has tried Klebs' "antidiphtherin" (see *British Medical Journal*, November 11th, p. 1070) in four cases of diphtheria in Elberfeld Hospital. In two of these, the children were admitted with moderately high fever and slight membranous formation on the tonsils. They were at once treated with applications of a 5 per cent. solution of antidiphtherin three or four times a day, and on the following day the fever had subsided and the membranes had disappeared. In a third case in which the affection was very severe, with abundant formation of false membrane, tracheotomy had to be done on the second day after the commencement of the treatment; and as the application could not be made in the usual way, a 1 per cent. solution of antidiphtherin was dropped into the trachea through the cannula, but without effect. The child died from extension of the disease process to the bronchial tubes. In the fourth case the patient was a member of the assistant medical staff of the hospital, who contracted the disease at a tracheotomy. As soon as false membranes were visible, applications of antidiphtherin were begun. The remedy appeared at first to have a favorable effect; the membranes began to disintegrate, and the fever subsided on the day after treatment was begun. Soon, however, the membranes formed again and spread over the palate and uvula, and at the time of Kunne's report the issue of the case was still doubtful. He thinks, however, that it may fairly be concluded that in this case the remedy had no particular effect.

EFFECTS OF ALCOHOLIC ABUSE UPON POSTERITY.

A distinguished specialist in children's diseases observed ten families of drinkers and of temperate parents for a period of twelve years. He records his observations as follows:

The ten drinking families produced in those twelve years fifty-seven

children. Of these, twenty-five died in the first week of life, of weakness, of convulsive attacks, or of edema of the brain and membranes. Six of the children were idiots; five were stunted in size, and were of real dwarfish growth; five, when older, became epileptics; one, a boy, had grave chorea, ending in idiocy; five had inherited diseases and deformities, such as choreic hydrocephalus, harelip, and club foot; two of the epileptics mentioned became, by inheritance, drinkers. Only ten, therefore, of all these fifty-seven, or 17.5 per cent., showed during youth normal disposition and development of body and mind.

The ten temperate families produced in twelve years sixty-one children. Of these, five died in the first weeks of weakness; four, in the later years of childhood, had curable nervous affection; two only showed inherited nervous defects. The remaining fifty, or fully 8.19 per cent., were normal in every way, developing well in body and mind.—Dr. A. E. Schmid, *in Medical News*.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

WOOD (H. C.) ON A NOVEL EXPLANATION OF CHOREIC MOVEMENTS.

The interesting observation was made, clinically, that whereas in chorea the patellar reflex phenomenon, or knee-jerk, was lessened uniformly, this reflex became greatly exaggerated, by reinforcement, if some other voluntary movement were performed at the same time, such as raising the arms or clenching the fist. This he also explained on the theory of weakening of inhibition, and the failure of inhibitory resistance to the overflow of impulse from certain spinal motor cells to neighboring centres.

In the study of the pathology of chorea, it is a strange fact that we have hitherto overlooked the phenomenon of inhibition. The phenomena of chorea, like those of hysteria, are not phenomena of increased excitement of motor centres, but of paralysis of inhibition. The conjunction of increased muscular and nervous discharge, with evident weakness of the spinal centres, is explicable very plausibly upon Wood's theory that the motor cells are weak, but the inhibitory cells are weaker still. It only remains to add that in several patients very prompt and marked improvement followed the application of this theory by the use of full doses of quinine.—Editor, *Boston Medical and Surgical Journal*.

THE BACILLUS OF LEPROSY.

Campana, who has long experimented with the bacillus of leprosy (*Rif. Med.*, Nos. 292 and 293, vol. iv.), believes that he has succeeded in cultivating the organism. He describes the organism which he has cultivated as "a bacillus similar to the bacillus of leprosy," which developed in attempts made to cultivate an organism from tissue taken from a case of tubercular leprosy. The bacillus which he describes has a length of one-third to one-half of the diameter of a red corpuscle of the human blood; that is, it is from two to four micromillimetres long, its breadth at the thickest parts being one-fifth to an eighth of its length. It is usually straight,

but in rare instances somewhat flexed. When stained, the protoplasm is homogeneous, but sometimes interrupted by minute points clearer than the rest. Campana cultivated the organism in agar-agar with grape sugar, with the addition of 1 per cent. peptone. It thrives most luxuriantly at a temperature of 37° to 37.5° C. Treated with fuchsin and nitric acid, it retains the red coloration until placed in the second stain, which then takes the place of the first.—*British Medical Journal*.

OBSERVATIONS ON PERNICIOUS ANEMIA.

Various observers, as Klebs, Frankenhauser, Bernheim, etc., have described motile organisms in the blood in pernicious anemia. These, however, are now regarded as being simply altered blood corpuscles. Perles, adopting the hanging-drop method, has found peculiar motile bodies in the blood in three cases of pernicious anemia. They are best seen at the margin of the drop in the spaces between the corpuscles. Their shape varies with their position. When flat, they appear as long, narrow, thin, ovoid platelets; when on edge, as rods, standing on end almost as pin points, always surrounded by a clear zone due to their high refractility. Their size is constant; length, 3.4m.; breadth, one-sixth of length; thickness, one-twentieth of length. Their movement, which is more or less fish-like, varies in rapidity. They may wander across the field in a few minutes. He is inclined to believe that they possess a flagellum, but this is not definitely proved. They have not been observed in cover-glass preparations fixed and stained by the ordinary methods. Attempts at cultivation have failed. They were constantly present in all the specimens of blood examined by the hanging-drop method, and were especially numerous in those from the most severe of the three cases. They were absent from the blood in a large number of cases of secondary anemia.

Perles is inclined to regard these as living organisms, presumably protozoa, and also, from their constant presence in the blood of pernicious anemia cases, as the exciting cause thereof, but reserves final conclusions until after further examination.—Perles, in *Berlin klin. Woch.*, No. 40, 1893.

PRESERVATION OF PATHOLOGICAL SPECIMENS.

Moreau, of Tours, describes, in the *Journal of Hygiene* for October, 1893, a new method of preserving morbid specimens in such a manner as to show out their characteristic lesions. The various methods heretofore employed, though preventing putrefaction, do not preserve color. Moreau's procedure is as follows: The specimen is prepared according to ordinary methods, being dissected so as to make plain important points,

and mounted on a frame in glass, if it be large. So much done, the specimen is then colored, the colors applied representing exactly the natural tints, and then the whole preparation is submerged in the preserving fluid. Dr. Moreau has specimens which were prepared thus twenty years ago, and which have undergone no alteration. Oil colors cannot be utilized, since they are soluble in alcohol. Certain water colors also, which are prepared with dextrine, are soluble in alcohol. Those which may be used are five fundamental colors, viz., Prussian blue, chrome yellow, silver white, vermillion, and smoke black. These, and mixtures of them, give all the tones necessary. They ought to be pulverized, or, better, sifted. The colors should be tempered, according to the preservative employed, with a concentrated solution of gum arabic or the best gelatines. In place of the latter a cold solution of albumen may be used.—*Rev. Intern. de Bibliog. Med.*

GRAVE'S DISEASE.

In the Bradshaw Lecture for 1893, Professor Greenfield shows reason for considering exophthalmic goitre to be primarily an affection of the thyroid gland. He has held this view for some years, although nearly all English pathologists have believed otherwise. We give his own summary of evidence :

(1) The examination of the thyroid in Grave's disease reveals, in nearly all cases, a peculiar form of proliferation, resembling a proliferation for the performance of increased function.

(2) Partial or entire removal of the enlarged gland affords relief.

(3) The changes in the nervous system are such as may be seen in toxic diseases, *e.g.*, hydrophobia, and suggest toxic origin.

(4) The symptoms and anatomical changes in myxedema and Grave's disease contrast in such a manner as to suggest the local origin of both.

(5) The phenomena of Grave's disease correspond in important respects with those due to thyroid feeding.

The conclusion is that in Grave's disease the symptoms are due to an overproduction of the special elements manufactured normally by the thyroid, the overproduction being a result of overgrowth of the active glandular tissue of the organ.

Thyroid extract, in proper doses, acts as a remedy in myxedema ; in excessive doses, it gives rise to toxic symptoms. In Grave's disease a more or less continuous overdosing goes on from the enlarged gland, and the symptoms are those of a toxemia.

Editorials.

THE CANADIAN PRACTITIONER.

THE *Canadian Journal of Medical Science* made its first appearance in January, 1876, under the editorship of Drs. Uzziel Ogden and Richard Zimmerman. The title was found to be a heavy load to carry ; and, as a consequence, in time the more modest name of THE CANADIAN PRACTITIONER was given to it. By the latter title our journal is now fairly well known to the profession in our own country, and to a certain extent beyond the Dominion of Canada.

In January, 1888, Messrs. The J. E. Bryant Co., of 58 Bay street, Toronto, assumed the business management of the journal, and have retained it up to the present time. As proprietors of THE CANADIAN PRACTITIONER, the members of the company have always taken a deep interest in its success ; and in the year 1892 gave the editor full permission to enlarge the journal, improve its appearance, and increase the editorial and contributing staff, with a view of putting it on a level with the best medical publications in the world. They also decided that no expense would be spared in attaining the object they had in view.

The generosity and enterprise of the publishers were highly appreciated, and a strong effort has been, and is being, made to produce a medical magazine which will be a source of pride to men who have shown such a strong desire to furnish a really good medical journal, and at the same time a source of satisfaction to the medical profession of Canada. We are glad to be able to say that the publishers are quite satisfied with the success which has been achieved. We have also reason to believe that the members of the profession are not dissatisfied with our progress.

We have much pleasure in announcing that in the future our eighty pages of ordinary reading matter will not be marred by the presence of inserts or fly-leaves of any description pertaining to advertisements, nor will they contain what are called reading notices of articles advertised. Our advertisements

will appear in the place allotted to them, and none of an objectionable character will be allowed to appear.

We desire to tender our thanks to the numerous friends who, during the past year, have said many kind things about THE PRACTITIONER. It is unlikely that we shall make any further comments on these matters for some time to come. We will allow the journal to speak for itself, with the hope that it will be judged only and solely on its merits. We trust that all our subscribers will make it a point to remember us, and send us contributions from time to time. The success of any medical journal depends largely on the character of its original articles. Will our friends kindly remember this, and endeavor to do their share in making THE CANADIAN PRACTITIONER a first-class journal in all respects?

TEMPERAMENT.

IT seems to be generally admitted that the world has lost the greatest physician of this century through the death of Sir Andrew Clark. Many kind things have been said about him, and much that is exceedingly interesting with reference to his life and character has appeared in both the lay and medical press. While holding the highest position among physicians in Great Britain, he was also highly honored and esteemed by many of the most distinguished men of his country outside of the profession of medicine. Mr. Gladstone and the late Lord Tennyson were two of his most intimate friends. It is well known that he was in poor health a great portion of his life; and yet he did an enormous amount of work. Some think that he should have reserved his strength by doing less work, by which course of conduct his life might have been prolonged.

The *British Medical Journal*, December 2nd, has an interesting article on the subject of temperament, from which we quote the following:

"Far be it from us to say that a man shall close his ears to the advice of his friends and well-wishers, but let his well-wishers remember that a man is not made up of snips of wisdom; but, if he be a man of mark, he has his own temperament, and by this temperament he will stand or fall. This temperament may, no doubt, be modified by education during the earlier and more plastic years of life, but it may also be spoiled. In any case, it must be taken as a whole and educated as a whole, not tinkered at in detail; for, inconsistent as its parts may seem to be on the surface, all its parts have an organic consistency within.

"Had Andrew Clark delegated much of his work to others ; had he availed himself of labor-saving devices ; had he shirked work lest work should kill him, he would have been a more calculating man, perhaps a more prudent man, but he would have been another man. Do we wish him other than he was ? Do we wish that one striking personality had been wanting to the roll of the great men of our day ? If not, then let us cherish the memory of Andrew Clark thankfully, as of one who has been well compared with a soldier who listens to no counsels of safety as he goes into battle, and with that sentry who, overwhelmed with ashes from Vesuvius, stood to his post."

DR. SANGSTER AND THE MEDICAL COUNCIL.

DR. SANGSTER, of Port Perry, having received a requisition signed by a considerable majority of the medical electors of Territorial Division No. 12, has consented to allow his name to be placed in nomination for the next election of the Ontario Medical Council. We have no desire to discuss any issues, personal or otherwise, which may come up in the election for this division—in fact, at the time of writing, we know not who will oppose him ; but we desire to say, in a general way, that the election of Dr. Sangster, as a member of the next council, is very desirable, for various reasons.

As secretary of the Ontario Defence Association, he has shown great activity and undoubted ability ; and, we think, he may be fairly considered the chief representative of that very strong organization. He is, therefore, in a way, the leader of the opposition, and, as such, should have a seat in our medical parliament. He has been firing pretty hot shot into the ranks of the council ; his party has achieved a most signal victory ; and it seems proper, all things considered, that he should be invested with the responsibilities of office. As an attacking sharpshooter, he has shown but little mercy ; he has hardly noticed the white flag—which was never held up very high, however. As a member of the council, he might become less radical and less extreme ; he would certainly discuss ably and intelligently the various medical questions requiring deliberation and legislation.

We have received a copy of Dr. Sangster's letter of acceptance in answer to the requisition. It contains a clear exposition of his views respecting a number of the vexed questions which are now creating so much interest in the ranks of the medical profession of Ontario. We have extracted from the letter that portion which deals with council matters,

and publish it in this issue of *THE PRACTITIONER*—not because it represents the views of any one man, but because we regard it as practically the platform of the Defence Association at the present time.

ONTARIO MEDICAL ASSOCIATION.

WE are requested by the secretary to remind the members of the Ontario Medical Association that the next meeting will be held in Toronto early in June. Members who intend to prepare papers for the meeting are requested to send in the titles of such as soon as possible. It will be remembered that the meeting of last year was not up to the average, as far as numbers were concerned; but the falling off was probably due to causes which will not exist during the year 1894. We will have no World's Fair nor Pan-American Medical Congress to act as counter-attractions for our members.

The association has been, in many respects, very successful in the past; and now, it seems to us, has reached a stage where it cannot stand still. Will it take decided steps in advance, or will it fall backwards? That depends entirely on its members. Never in the history of medicine in Ontario have we had a better class of practitioners in this province, nor a greater number of men well qualified to write able and well-digested papers.

The scientific worker in the laboratory and the intelligent general practitioner has each his proper sphere in an association such as this. Many of those who have borne the chief burden in the past will prefer now to see younger members step forward and do the major portion of the work. We believe that the younger men will be found quite equal to the occasion, if they can be induced to act; but we sincerely hope that each of them will not wait for a special invitation from some officer of the society before he commences to prepare his paper.

Correspondence.

DR. SANGSTER'S VIEWS ON MATTERS PERTAINING TO THE MEDICAL COUNCIL.

Dr. J. H. Sangster, of Port Perry, has sent a circular letter to the medical electors of Division No. 12. We extract from it the following statement of his views on certain questions now before the electorate :

(1) The Ontario Medical Act contains a number of provisions that have been conceived in the interests of the profession, and some that, from the same standpoint, call for repeal. As soon as such amendments as the experience of the past, and a general consensus of professional opinion, show to be necessary shall have been secured, the Act, in its essential features, should, I think, be carefully preserved.

(2) The Medical Council must be retained, and, by every possible means, strengthened, as a barrier against mendacious quackery and the too easy access of new men to the profession. While I am in favor of very materially modifying its composition so as to make it strictly elective and representative, and, at the same time, less unwieldy in bulk and less costly in maintenance, I would diligently oppose anything being done to lessen its usefulness, or to hamper it in its action as our executive. I would remodel it—not to destroy, but to perfect, and to establish it on a just and more enduring basis. The territorial representation has been increased from twelve to seventeen, not because it was thought desirable to enlarge the council as a whole, but because, owing to the present divergence of opinion among medical men, that was found to be the only practicable mode of securing to the profession a controlling voice in the management of its own affairs. As soon as practitioners, generally, recognize the fact that a large measure of professional abasement is involved in their tame submission to the unwarrantable dictation and interference of school appointees, an effective remedy will be found within their easy reach, and, thereafter, a homogeneous council of ten or twelve members will prove amply sufficient for our protection and government.

(3) While emphatically reaffirming the principle of self-government, pure and simple, and recording my conviction that we shall eventually secure it, I am prepared—pending the full development of public and professional opinion on this point—to insist on the elimination, from the council, of the representatives of defunct institutions or those no longer having a separate corporate existence, and the strict limitation of the functions of the remaining university appointees to matters of curriculum and education.

(4) No sensible man desires to see the practice of medicine made a close monopoly, but the public is almost as much concerned as the profession in keeping the number of practitioners within reasonable bounds. Yet our ranks have been suffered to become so much overcrowded in Ontario that there are now fully twice as many medical men in the province as the public service requires. The demoralizing and injurious tendencies of this large surplusage on the profession itself must be obvious to all. The schools have, in the furtherance of their own interests, suffered the professional curriculum to become as advanced as can reasonably be required, but the same dominant influence has, since the election of the present council, secured the degradation of the matriculation standard, and, as a consequence, the new medical matriculants registered annually by the council have increased during the last three years from 70, in 1890, to 125 in 1891, and to 210 during only the first ten months of 1892. I am prepared to advocate an immediate and material increase in the requirements for matriculation, and the adoption of a single professional examination—comprehensive, rigid, and impartial—to be held at the close of the student's course of study. I do not approve of multiplied examinations on the instalment plan, or of supplemental or of simultaneous examinations. I hold that it is not the business of the council to thus oil the approaches to the profession. It appears to be quite as anxious to secure new recruits as the Foreign Mission Board of any live Christian church. I consider that this is unnecessary in the present lamentably overcrowded condition of the profession, and that in facilitating access to our ranks, by these and other means, it is alike disloyal to the public and to the medical electorate. The Medical Council owes, or should owe, a higher and a more imperative duty to those who are already members of the College of Physicians and Surgeons than to those who simply desire to become such.

(5) The finances of the council call for wise and careful management. The most rigid economy, compatible with efficiency of service, must be insisted on, and not only should a detailed annual statement of receipts and expenditure be submitted to the profession, but the accounts should be subject to an annual audit by reliable and impartial officers, appointed

from outside the council for that purpose. I need not here enter into any detail of the many particulars to which retrenchment is both possible and desirable; but I unhesitatingly express my conviction that, when unnecessary items of expenditure are lopped off, and extravagant outlays curtailed, and the mere luxuries of officialism sharply reduced, the council's ordinary income will be found amply sufficient to meet its liabilities without the assessment of any annual tax.

(6) If, however, through the contraction of its yearly receipts, and notwithstanding the exercise of such wise economy as the board of a company of shareholders would employ in the management of its finances, it should become requisite, in the more or less immediate future, to supplement the council's ordinary income, I would agree to a moderate tax on the profession—always providing the educational bodies, having and using the right to speak and to vote in the council, by their representatives, on questions involving the expenditure of money, agree or are compelled to assess themselves proportionately. The certainty that, in future, an assessment on the electorate will necessitate a liberal contribution from the schools will probably have the effect of making the appointees, while they remain constituent parts of the council, much more economically inclined than they have been heretofore, and will thus tend to obviate the necessity of either assessments or contributions.

(7) In no case would I agree to the reinstitution of the penal clause known as section 41 (a), which, in 1891, was surreptitiously engineered into the Ontario Medical Act by the present council, and which, together with the assessment clause, in spite of the determined opposition of the council, was suspended by the Legislature last spring, and remains a dead letter, unless restored and put in force by the men whom you and your professional confreres throughout the province are now about to elect.

(8) I believe that the law never contemplated the council becoming the holder of real estate for the purposes of speculation, and that the sooner the council can disembarrass itself of its Toronto property the better. I do not, however, think that the property in question should be recklessly sacrificed. I would advocate its being placed in the hands of a real estate agent, and sold as soon as a price is offered which approximates anywhere nearly to its cost. Having relieved itself of this incubus, the council, for less than half the sum it now annually pays as interest on the mortgage, would probably be able to lease its present accommodation; or, failing this, it might proceed to erect, in a less expensive locality, an unpretentious structure, suitable to its wants, and easily within its means.

(Sgd.)

JOHN H. SANGSTER.

CANADIAN MEDICAL ASSOCIATION.

A GOOD many years ago it occurred to some of the members of the profession in the Dominion that there should be a way of forming a closer bond of union among the doctors in all the provinces. With that object in view, a medical conference was called, with delegates from each of the provinces, to consider the matter. They met in the hall of Laval University, Quebec, on Wednesday, October 9th, 1867. Dr. James Arthur Sewell, president of the Quebec Medical Society, was in the chair. Dr. Alfred Belleau acted as secretary.

After some preliminary business had been transacted, Dr. Wm. S. Harding, of St. John, N.B., moved, seconded by Dr. William Marsden, of Quebec, Q., "That it is expedient for the medical profession of the Dominion of Canada to form a medical association, to be named 'The Canadian Medical Association.'" Carried.

A nominating committee was appointed. They brought in a report, which, after some discussion and one or two amendments, was adopted. The first officers of the association were : President, Hon. Charles Tupper, C.B., Halifax, N.S.; vice-presidents : Quebec—Dr. Hector Peltier, Montreal, Q. ; Nova Scotia—Dr. R. S. Black, Halifax ; New Brunswick—Dr. LeBarm Botsford, St. John ; Ontario—Dr. E. M. Hadder, Toronto ; general secretary, Dr. Alfred G. Belleau, Quebec ; local secretaries : Québec—Dr. W. H. Hingston, Montreal ; Nova Scotia—Dr. James R. DeWolf, Halifax ; New Brunswick—Dr. W. S. Harding, St. John ; Ontario—Dr. Wm. Canniff, Belleville ; treasurer, Dr. Robert Henry Russell, Quebec.

Thus commenced an organization the value of which cannot be overestimated by the profession of this Dominion. Since then large and successful provincial societies have sprung up, and it has been thought that the work of the Canadian Medical Association has been completed.

Fortunately for the profession generally, this opinion has been held by but a limited number, and up to the present all attempts to curtail its usefulness have failed. During the last few years there has been much enthusiasm over the meetings, and the attendance has been large. Next year the meeting will be held in St. John, N.B., some time in September ; and, if united effort can do anything, the members of the profession in the Maritime Provinces intend to make this one of the most successful meetings the association has ever known.

F. N. G. STARR, Secretary.

CORRESPONDENCE.

BRANT COUNTY MEDICAL ASSOCIATION.

THE usual quarterly meeting of the Brant County Medical Association was held on December 4th, 1893, in the hall of the John H. Stratford Hospital, Brantford. There was an unusually large number of members present, both from the county and city. Dr. Griffin, president, in the chair, and Dr. Keane, secretary. The subject of the advisability of nominating a candidate as representative in the Ontario Medical Council for Division No. 8, which includes the counties of Brant, Haldimand, Simcoe, and Welland, at the next election was discussed, and the following resolution was moved by Dr. Addison, St. George, seconded by Dr. Dunton, Paris: "That we, the members of the Brant County Medical Association, in convocation assembled, desire to express our appreciation of the valuable services rendered by our representative, Dr. D. L. Philip, in the Ontario Medical Council during the past ten years; that we desire to express our hearty approval of the general policy pursued by the Medical Council in legislating for the benefit of the public and the profession, and in which our representative has taken a prominent and useful part; and also, as important questions are likely to arise in the near future affecting the welfare of the profession, and in which his knowledge and experience in the council would be of benefit to the profession, that it would not be desirable to change the representative at the present time, and that we, therefore, respectfully request Dr. Philip to allow himself to be nominated as a candidate in the election for 1894." Carried unanimously.

Dr. Philip, in accepting the nomination to become a candidate for another term, thanked the members for the hearty support which he had always received from them and from the profession throughout the division while acting as their representative in the council. In the event of his election he would endeavor to serve them faithfully and to the best of his ability, and he would ever entertain a grateful remembrance of their kindness, whether elected or not, in the support which he had received at their hands. Dr. U. M. Stanley, Brantford; Dr. Burt, Paris; Dr. Harris, and others, spoke in the most commendatory terms of the course pursued by their representative, and trusted that, under present circumstances, he be elected without a contest.

Dr. Bremner, Toronto, gave an address on Orthopedic Surgery, more especially the treatment of spinal curvature, showing some ingenious mechanical contrivances in their treatment. On motion, a cordial vote of thanks was tendered to him for his instructive address. A paper by Dr. Bishop had to be postponed till next meeting, owing to want of time. Several routine matters were disposed of, and the meeting adjourned till the first Wednesday in March.

M. I. KEANE, Secretary.

Brantford, January, 1894.

Book Reviews.

PHYSICIANS' OFFICE DAY-BOOK. Designed by C. Henri Leonard, A.M., M.D., Professor of Medical and Surgical Diseases of Women and Clinical Gynecology, Michigan College of Medicine, Detroit. Price, \$2.00; postpaid to any address. Issued by *The Illustrated Medical Journal* Company, Detroit, Michigan.

In speaking of Leonard's pocket day-book in our November issue, we referred incidentally to the larger office day-book as above described. The writer of that notice stated that he had used the office day-book with satisfaction for eight years. Since that time another member of our editorial staff has adopted the Leonard system, and considers that this office day-book is the best of the kind available. It is so arranged that it will last four years for twenty-five families per day, two years for fifty families per day, or one year for one hundred families per day. The family names need to be written but once per month.

THE PHYSICIANS' VISITING LIST (Lindsay & Blakiston's) for 1894. Forty-third year of its publication. Philadelphia: P. Blakiston, Son & Co.

This has been a favorite visiting list for a long time; in fact, ever since its first issue, forty-three years ago. It contains in its earlier pages a good deal of useful information on various subjects, including the metric system of weights and measures, dosage, new remedies, incompatibilities, poisons, disinfectants, etc.

The general arrangement of the visiting list is convenient for practitioners. After the visiting list proper comes a portion of the book which contains blanks for general memoranda, addresses of patients, accounts, obstetric engagements, obstetric reports, etc. It contains much in a small space, and occupies but little room in one's breast pocket.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on medicine, neurology, pediatrics, surgery, genito-urinary surgery, gynecology, ophthalmology, laryngology, otology, and dermatology. By professors and lecturers in the leading medical colleges in the United States, Great Britain, and Canada. Edited by John M. Keating, M.D.; Judson Daland, M.D.; J. Mitchell Bruce, M.D., F.R.C.P.; and David W. Finlay, M.D., F.R.C.P. Published by The J. B. Lippincott Company, Philadelphia.

Volume I. of the third series has been in hand for some months, but, from an oversight, it has not been reviewed. It is an especially good number. The

clinics are concise, yet thorough. When we see such names as David W. Finlay, F.R.C.P., Sir Dyse Duckworth, M.D., Beverley Robinson, M.D., Roswell Park, M.D., J. Bland Sutton, M.D., Arpad E. Gerster, M.D., Reeves Jackson, M.D., A. Pearce Gould, F.R.C.S., appear as the authors of these clinics, we need nothing further to confirm our opinion of their high order. The series has been exceedingly popular amongst the profession, and deservedly so, because the editors have exercised the greatest care in selecting the clinics, and have only utilized those of practical value.

A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY, AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D. In three volumes. Published by D. Appleton & Co., New York. Toronto agency, Geo. N. Morang, 63 Yonge street. Subscription only. Volume II., "Syphilology."

The second volume of Morrow's system contains a rare collection of the very highest opinion on the subject of syphilis. Each chapter is written by a gentleman who has paid some more *particular* attention to the subject in hand. It opens with a chapter on history and geographical distribution, by Dr. J. Nevin Hyde, which is exceedingly interesting reading.

Chapter II., by Dr. J. A. Fordyce, on the etiology, is very carefully prepared. It deals with the syphilis poison—the micro-organism of syphilis—and shows the difficulties that have been, and are, in the way of demonstrating it. The different methods of making sections, and staining, to best discover them are all thoroughly discussed. Dr. Bulkley discusses the modes of infection.

The primary affection is treated by Dr. Bronson. This chapter is a most important one, and should be read carefully. The difficulties in the matter of diagnosis in some sores are well put forward, and means of sailing safely between Scylla and Charybdis are pointed out. It is an exceedingly difficult question to answer, in some cases, and a positive answer requires much mature consideration.

Dr. Zeisler, of Chicago, treats of constitutional syphilis—that is, in its secondary stage, in the resulting cachexia, in its effects on injuries sustained by the patient, etc. The many different organs are each treated of in chapters by themselves—that of the skin, possibly the most frequently affected, taking up two chapters, one by Dr. Morrow, and the other by Dr. Alexander.

Hereditary syphilis is treated of in five chapters, and the whole range of the subject well gone into. There are three chapters, particularly, that should be carefully read and digested—those on "Diagnosis and Prognosis," by Dr. Hermann G. Klotz; "Prophylaxis and Treatment," by Dr. J. William White; and "The Relation of Syphilis to Public Health, Marriage," etc. In these three chapters much valuable knowledge is contained. The whole bibliography of the subject has been gone through, and the opinions *pro* and *con* are given, with the personal views of the writer. They are all written with a freedom of opinion that is charming, but you can easily recognize the authority behind each statement; it is analyzed for you, and the argument is usually very clear.

We most sincerely recommend the work to the profession. Those who see many cases cannot afford to be without it, and those who only see occa-

sional cases ought not. They will always find contained in the volume the best and latest authority, together with the opinions held long ago.

The publishers can again be congratulated on the typography, presswork, and binding of this volume. We shall look forward with renewed expectation for the concluding volume on Dermatology.

ANATOMY, DESCRIPTIVE AND SURGICAL. By Henry Gray, F.R.S., Lecturer on Anatomy of St. George's Hospital, London. New American, from the thirteenth enlarged and improved English edition. Edited by T. Pickering Pick, F.R.C.S., Examiner in Anatomy, Royal College of Surgeons of England. In one imperial octavo volume of 1100 pages, with 635 large engravings. Price, with illustrations in colors: Cloth, \$7; leather, \$8. Price, with illustrations in black: Cloth, \$6; leather, \$7. Philadelphia: Lea Brothers & Co., 1893.

We are glad to see that the American edition of this great English text-book of anatomy is no longer issued as a work greatly modified by the American editor. No one would impugn, for an instant, the ability of the editor of former American editions, but this text-book is essentially an *English* text-book, and is best known under the editorship of Mr. T. Pickering Pick. We prefer to have it (as in the present American edition) in a form in which he alone is responsible for the statements therein contained. The system of adding a large amount of information (in brackets) by an American editor is, to our mind, a great mistake. It alters the character of the work, and in no sense tends to improve it.

Of recent years mistakes, usually of minor importance, have crept into this work. These have been corrected, from time to time, and the present edition seems to be more free from such errors than its predecessors. There are certain inaccuracies which still exist. As an instance of this, we will mention one. The temporal muscle is described (p. 405) as arising from the whole of the temporal fossa, *except that portion of it that is formed by the malar bone*. In the description of the malar bone (pp. 198 and 199), the bone is figured with an attachment of the temporal muscle represented thereon, and the statement is made that the temporal muscle *is* attached to it. Here there is a discrepancy in the statements, the mistake being in the description of the bone.

This work stands in the front rank of anatomical text-books. It has always been a favorite with students of all schools, and it is safe to predict that the reputation which it has attained will continue to be preserved. There is no work of the kind more widely used and more deservedly appreciated.

Medical Items.

PROF. OSLER, of Baltimore, visited Toronto during the Christmas holidays.

PROF. BERGMANN has been elected Dean of the Medical Faculty of the University of Berlin.

DR. A. JACOBI, of New York, was offered the position of Professor of Pediatrics in the University of Berlin, but declined to accept it.

MISS EMILY WINIFRED DICKSON, M.B., Royal University, obtained the Fellowship of the Royal College of Surgeons, Ireland, December 1st.

DR. JAMES CAMPBELL, of Detroit, formerly a student of the Toronto School of Medicine and a graduate of Victoria University, 1882, died Nov. 18th.

DR. M. V. MULCAHY (Tor., '89), of Elk Point, South Dakota, has been appointed a member of the Pension Examining Board of Washington, D.C.

DR. HARLEY W. SMITH delivered a lecture on the subject of "Nervousness" in Toronto at a meeting of the Y.W.C. Guild on Monday evening, Jan. 8th.

THE contributions from England and her colonies to the Semmelweiss memorial fund amount to only about four hundred dollars, but it is hoped that additional contributions will come in.

A QUARTERLY meeting of the Huron Medical Association was held in Seaforth, January 9th. We are glad to learn that this admirable society continues to be in a flourishing condition. We wish there were many more of the same sort in various parts of Ontario.

THE *New York Journal of Gynecology and Obstetrics*, which enters on its fourth year this month, will in future be published by Messrs. D. Appleton & Co. This journal has been remarkably successful during the last three years; and its future, considering the ability of the editors and the well-deserved reputation of the Appletons, is likely to be a very bright one.

DR. JAMES F. W. ROSS, of Toronto, will read a paper on "Influences Affecting the Results of Abdominal Operations" at the Albany meeting of the New York State Medical Society. After the meeting he expects to go to Philadelphia and spend a few days as the guest of Dr. Joseph Price, who expects to have some hysterectomies on hand at that time.

THE new journal being published at Louisville, Kentucky, is to be called *Mattheus Medical Quarterly*. It will be devoted to diseases of the rectum, gastro-intestinal diseases, and rectal and gastro-intestinal surgery, under the editorship of Dr. Joseph M. Matthews, Professor of Surgery and Clinical Lecturer on Diseases of the Rectum in the Kentucky School of Medicine.

DR. EGERTON Y. DAVIS, who so highly distinguished himself by his publication of the results of his investigations among the savage tribes of the great Northwest Territory, paid a recent visit to Toronto. He likes not the commonplace things of civilized life, and it is rumored that he has returned to his old haunts, where he is likely to remain until he is called to the "Happy Hunting Grounds."

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON.—After a somewhat exciting contest, Dr. J. Russell Reynolds was elected president of the college in the place of Sir Andrew Clark, deceased. The vote was a very close one; Dr. Reynolds, who represents the interests of the University College, received seventy-five votes, while Dr. Samuel Wilkes, who represents the interests of Guy's Hospital, received seventy-two votes.

CANADIAN MEDICAL ASSOCIATION.—We publish in this issue an interesting communication with reference to the Canadian Medical Association from Dr. Starr, the secretary, containing an account of the organization of the Canadian Medical Association in Quebec in the year 1867. The next meeting will be held in St. John, N.B., some time in September, 1894. We understand that our brethren in the east are making arrangements to give us a cordial greeting, and we hope there will be a large attendance from Ontario, Manitoba, and the Far West.

LONGEVITY AND OVARIOTOMY.—Dr. Harris, of Philadelphia, has written to Sir Spencer Wells to inform him that there is living, and in excellent health, an unmarried lady, 81 years of age, for whom the late Dr. John L. Atlee performed ovariectomy in June, 1843, more than fifty years ago. Dr. Harris asked if this case can be paralleled in England. This was Dr. Atlee's first ovariectomy. He had 80 cases; he operated on seven in the year he became 84 years of age; he performed tracheotomy when nearly 85, and died when nearly 86. We are indebted to Sir Spencer Wells for the interesting facts furnished by Dr. Harris.—*Brit. Med. Journ.*

WE have received a short report of the last meeting of the Brant County Medical Association, which we publish in this issue. It contains a resolution with reference to the candidature of Dr. D. L. Philip, of Brantford, in the next election for the Ontario Medical Council, and cordially endorsing his actions in the past as a member of that body. We think it will be generally admitted that Dr. Philip has been a very useful member of the council during the last ten years. He is rather a worker than a talker (although he can talk enough when it is desirable). He has shown excellent judgment, as a rule, and has made few mistakes. He is very highly respected by his confreres in and about Brantford, and we are told that he is likely to be re-elected.

At a meeting of the Hamilton Medical and Surgical Society, held January 17th, the following officers were elected : President, Dr. G. S. Rennie ; vice-president, Dr. J. W. Edgar ; secretary, Dr. R. H. Gowland ; treasurer, Dr. Balfe.

HURON MEDICAL ASSOCIATION.—At the annual meeting of this association, held in the Mechanics' Institute, Seaforth, on Tuesday, the 9th January, papers were read by Dr. Bruce Smith and Dr. Campbell on "Typhoid Fever and Alopecia Areata," along with the presentation of cases in their practice, eliciting interesting discussion. The following officers were elected for the ensuing year ; President, Dr. Turnbull, Clinton ; vice-president, Dr. D. Smith, Mitchell ; secretary-treasurer, Dr. Shaw, Clinton. Dr. Bruce Smith was chosen as the candidate of the association for a seat in the Ontario Medical Council. The next meeting will be held in Clinton in April. J. W. Shaw, M.D., secretary.

THE International Medical Congress will meet in Rome, March 29th to April 5th, 1894. We have received communications from Dr. Jacobi, chairman of the American International Committee, from which we extract as follows : First, paper to be read should be announced on or before Jan. 31st, 1894 ; second, the title of the paper ought to be accompanied with a brief abstract of its contents and conclusions ; third, the reductions granted by the railway companies will be available from March 1st to April 30th, 1894 ; fourth, it will be in the interest of those attending to obtain credentials from Dr. Jacobi, and also passports, before sailing for Europe ; fifth, "travelling documents" will be sent to subscribers on or before Feb. 15th, 1894, after that date "congressists" will have to apply to Dr. Jacobi ; sixth, members dues are \$5, guests dues are \$2, all are entitled to "travelling documents."

In the *Buffalo Medical and Surgical Journal* for December, 1893, we find that a Mr. Anthony Comstock, a special agent of the Post Office Department, has been on a visit to Buffalo, and has placed the manager of the Daggett Table Company under arrest. According to the *Buffalo Medical and Surgical Journal*, the cause of this arrest was the fact that the company had mailed circulars that were unmailable, and that were in violation of the statutes, no matter for what purpose they were intended or used. The journal says, further, that such an attack is absurd ; for if it were held by the court to be just, the whole illustrated literature of medicine must necessarily be excluded from the mails. Scarcely a medical journal can be picked up but would be liable to seizure, and its editors liable to arrest, if such plates as those of the Daggett Table Company are contrary to the statutes relating to mailed matter. We will look with considerable interest for the final settlement of this case. It seems to us that it should have but one ending, and seems, further, absurd that such an attack should have been commenced.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—The eighty-eighth annual meeting of this society will be held on February, 6th, 7th, and 8th, at Albany. We learn from the provisional programme that over seventy papers have been promised, mostly by regular members, and also by parties living in Canada and certain States of the Union outside of New York, who have been

specially invited. Among the invited guests whose names appear on the programme, we find the following: Dr. J. F. W. Ross, of Toronto; Dr. W. Gardner, of Montreal; Drs. Joseph Price and C. F. Noble, of Philadelphia; Drs. C. A. L. Reed, A. W. Johnstone, and R. B. Hall, of Cincinnati; Dr. Howard Kelly, of Baltimore; Dr. W. E. B. Davis, of Birmingham; Dr. D. P. Allan, of Cleveland; Dr. Cushing, of Boston; and Dr. Daly, of Pittsburg. Among the regular members who will read papers, we find the following: Drs. Satterthwaite, O'Dwyer, Jacobi, Coe, Boldt, Skene, Mundé, Currier, Sturgis, Powell, Bulkley, McBurney, Meyer, Bryant, St. John, Roosa, and Morris, of New York; and others equally well known from Brooklyn, Buffalo, and other cities of New York State. The meeting is likely to be a very successful one.

OBITUARY.

DR. GEORGE HENRY BOULTER, of Stirling, County of Hastings, died, after a short illness from pneumonia, January 18th. He graduated at the McGill University, 1852, and was one of the best known and most popular physicians in Central Canada. He had for many years a large and lucrative practice. In addition, he devoted much time to municipal and provincial politics; was warden of his county for a time, and also represented it in the Ontario Legislature for sixteen years. He was an enthusiastic volunteer, and was for many years colonel of the 49th Battalion, Hastings Rifles.

ROLPH BIDWELL LESSLIE, M.A., M.D., L.R.C.P., LONDON.—Dr. Rolph Lesslie was a graduate in Arts and Medicine of the University of Toronto. After receiving his degree in medicine, he went to England, where he became a licentiate of the Royal College of Physicians of London. He also did post-graduate work in Berlin and Vienna. During the Servian war he went out with the Turkish army as Surgeon-Major. During the Russo-Turkish war he served with the Red Cross Ambulance, and saw a great deal of hard fighting. At the close of the war he was appointed medical officer to the Turkish Compassionate Fund (organized by the Baroness Burdette-Coutts). He afterwards served with the English army during the Zulu war. After this he spent nearly two years in London, where he held Resident Hospital appointments. He then visited India, China, and Australia, after which he went to Congo, with others, on a special mission for the King of the Belgians. On his return he was thanked by the king for his services, and shortly afterwards was again sent to Africa, where he remained two years. Shortly after this he went on a tour round the world.

Dr. Lesslie was a son of Mr. Lesslie, the ex-postmaster of Toronto, and a brother of Dr. Jos. Lesslie, and was well known and highly esteemed by his friends in this city. It was hoped many times during his wonderfully eventful career that he would return to his own country for permanent residence. He paid a few visits to Toronto, but could not be induced to remain long. He was subject to serious perils, and endured great hardships at different times in his life, but especially during his last experience among the wilds of Africa. It is possible that his health and strength were in this way permanently impaired. At the time of writing we know not the particulars as to his last illness, excepting that he died of fever on the island of Dominica, West Indies, December 20th.

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Original Communications.

PURULENT PLEURISIES.*

BY J. E. GRAHAM, M.D., M.R.C.P., LOND.,
Professor of Medicine, University of Toronto.

PHYSICIANS who have seen many cases of purulent pleurisy, and who have observed closely the course of the disease in each case, will no doubt be willing to testify to the fact of the great variety of the affection; variety as to origin, as to the nature of the contents, and as to the duration of the disease.

Sometimes the symptoms at first presented are those of an ordinary pleurisy, which afterwards develops into an empyema. Then, again, a case may begin as a pneumonia, exhibiting all the signs and symptoms of that disease, and terminate as an empyema. The pleural exudate varies much in character in different cases. It is sometimes sero-purulent, and sometimes uniformly purulent. Often the upper portion is serous, and lower portion purulent. In a number of cases, again, the contents become fetid.

The course and duration of the disease also present great differences; some cases recover after a single aspiration, while in others the discharge

* Read at the Toronto Medical Society, in opening the discussion on Purulent Pleurisies.

may continue for months, or even years. An Estlander's operation may be necessary to close the cavity.

Latterly, an attempt has been made to classify purulent pleurisies according to the bacteriological factor present in each case, and, as I considered this to be of great importance from a clinical standpoint, I concluded to make it the subject of my paper.

Dr. Netter, of Paris, (Charcot's *Traité de Médecine*) has made investigations into a large number of these cases, and has found certain micro-organisms present in each one, and has discovered, moreover, that these micro-organisms play a definite rôle in the course and duration of the disease. For instance, in some he found the streptococcus alone; in others, again, the pneumococcus; and in a third set both these forms were present. He, therefore, made the following classification:

A. Purulent pleurisies the result of pyogenic micro-organisms:

- (1) Purulent pleurisy due to the streptococcus.
- (2) Purulent pleurisy due to the pneumococcus.
- (3) Purulent pleurisy due to the less common organisms:
 - (a) Staphylococcus.
 - (b) Pneumo-bacillus of Friedlander.
 - (c) Typhoid bacillus.

B. Purulent tubercular pleurisies.

C. Putrid purulent pleurisies.

Dr. Netter found that in the 109 cases which he investigated the variety of pleurisy depended to some extent upon the age, as shown by the following percentages. In the first series, all the cases were taken together. In the second and third, the adults and children were separated.

(1) Adults and children: Streptococcus found in 44 per cent.; streptococcus and pneumococcus in 2.8 per cent.; pneumococcus in 26.7 per cent.; staphylococcus in 1.8 per cent.; tubercular and putrid, in 24.7 per cent.

(2) Adults alone: Streptococcus in 53 per cent.; streptococcus and pneumococcus in 2.5 per cent.; pneumococcus in 17.3 per cent.; staphylococcus in 1.2 per cent.; tubercular and putrid, in 25 per cent.

(3) In children alone: Pneumococcus in 53.6 per cent.; pneumo- and streptococcus in 3.6 per cent.; streptococcus in 17.6 per cent.; putrid pleurisies in 18.7 per cent.; tubercular pleurisies in 6.5 per cent.

Two or three points of interest are to be noticed in these statistics: The large proportion of cases in which but one micro-organism was found, proving that the disease is not often due to a mixed infection. That the pneumococcus is by far the most frequent organism found in children, while the streptococcus is found in the majority of cases in adults. The

large number of putrid pleurisies in children is also to be noted. The two principal forms will now be taken up and contrasted as to their origin, clinical history, nature of fluid, diagnosis, and treatment.

(1) *Purulent pleurisy, due to the streptococcus.* In 25 out of 62 cases the disease was secondary to lung affections. After la grippe, in 17 cases; broncho-pneumonia, 3 cases; pneumonia, 1 case; pulmonary tuberculosis, 2 cases; cancer, 1 case; dilatation of bronchi, 1 case. In 11 cases the disease followed puerperal infection.

The large number of cases in which la grippe was the primary disease is explained by the fact that these investigations were made by Dr. Netter in Paris during the season in which that disease was epidemic.

The pneumococcus form either follows a pneumonia or occurs primarily. In the great majority of cases pneumonia is the primary disease. The fact of the frequency with which empyema follows pneumonia is well established by the following statistics:

In the Koenigsberg clinic, pneumonia existed as the primary disease in 32 per cent. of the cases; at Berne, 22 per cent.; Helsingfors, 23 per cent.; Vienna, 28.6 per cent.; Hamburg, 39 per cent.; Berlin, 34 per cent.

This, sometimes called the pneumonic, form occurs much more frequently under thirty years of age, as shown by the following figures: Under 10 years, 93 cases; between 10 and 20 years, 62 cases; between 20 and 30 years, 60 cases; between 30 and 40 years, 30 cases; between 40 and 50 years, 22 cases; between 50 and 60 years, 6 cases; between 60 and 70 years, 7 cases; over 70 years, 1 case.

The pleurisy may occur during the attack of pneumonia, or it may commence towards the termination of that disease, the fluid increasing rapidly in quantity after the crisis. In the majority of cases, the pleurisy appears after the defervescence of the pneumonia. In a case which I recently saw with Dr. Bryans, the pleurisy began towards the termination of the pneumonia, and the fluid increased rapidly after the crisis. On the tenth day a small amount of fluid was withdrawn, in a few drops of which the pneumococci were found by Dr. John Caven; and on the fifteenth day the fluid had increased so enormously that it was necessary to aspirate, when 24 ozs. of pus of a greenish tint was drawn off. In this the pneumococci were the only organisms found. At the commencement of the disease the ordinary signs and symptoms of lobar pneumonia were present. A free opening was afterwards made, and thorough drainage established. The patient is doing well. The pneumonic form of empyema, of which this case is a good example, was described (by Gerhardt, in 1881) as a separate clinical variety. It is interesting to know that both the pneumonia and the pleurisy

are due to the same cause. In the case cited, as well as in another which I saw last spring, distinct pulsation occurred—they were, in fact, pulsating empyemata. Both were of the pneumonic form, and in both the fluid was found in greatest abundance in the upper part of the left chest.

These two forms of empyema will now be contrasted as to the character of the fluid. In the streptococcus variety the fluid may be slightly opaque, sero-purulent, or purulent. In large collections the upper portion may be serous, and the lower portion purulent.

In that due to the pneumococcus, the pus is uniformly thick, yellow, with a slightly greenish tinge, and is an excellent example of what the older writers called laudable pus. It does not readily separate into serum and pus. Its peculiar characteristics are great density, viscosity, and the greenish tinge.

In the streptococcus form, we have the ordinary signs and symptoms of sero-fibrinous pleurisy. The amount of effusion is usually large, and fills up the cavity, although it has occasionally been found localized. A striking peculiarity is the edema of its chest wall—a condition rarely found in the pneumonic form.

The evolution is slow. The virulence of the organism varies in different cases, depending largely upon individual peculiarities, and upon the disease to which the condition is often secondary. The duration is usually much longer than in the pneumonic form.

In the pneumococcus variety, the mode of onset is variable. In some cases, as in the one already given, there is a decided increase of the fever and dyspnea. It may, however, commence insidiously, so that a large quantity of fluid may be formed before it is discovered. Edema of the chest walls, which is so frequently found in the streptococcus form, is seldom seen in this variety. A striking peculiarity is the localization of the pus, often interlobar, often in the costo-diaphragmatic sinus, or in the upper part of the chest. The spontaneous evacuation of the pus through the bronchial tubes occurs very frequently in this form. It occurred in 20 per cent. of Gerhardt's cases. In the majority of such cases, there is no direct opening between the pus cavity and the bronchus, so that a pneumothorax is not produced. This form, then, may terminate in various ways :

- (1) By absorption.
- (2) Pus voided either through the bronchi, or through the walls of the chest.
- (3) Pus may remain encysted.

The duration is not so great as that of the first variety, as the life of the pneumococcus is limited.

I should like here to make a few remarks upon the diagnosis of the

presence of pus in these cases of pneumonia—a diagnosis which is often a very difficult matter. Too much confidence ought not to be placed in the auscultatory signs. The signs to which the most importance is to be given are diminished or absent vocal fremitus, flatness on percussion, immobility, and the displacement of organs.

It must be remembered that we may have more or less vocal fremitus over purulent effusion, which may arise from the fact that the pus is localized, or that there are strong bands of adhesion between lung and chest wall. It is safe to say, however, that the vocal fremitus is diminished in almost every case.

Flatness on percussion may be obtained over splenization of the lung. A case of this kind occurred in the Toronto General Hospital a few months ago. A young man came in with all the symptoms and signs of pneumonia. Near the base of the left lung, at about the level with the seventh or eighth ribs, two or three inches from the spine, there existed flatness on percussion, diminished vocal fremitus, and very clear tubular breathing. Pectoriloquy could be distinctly heard over the same area. A cavity at first was thought of; but as there was no history of previous disease, we concluded that the case was either one of complete splenization of the lung, or that there was a collection of fluid existing between the lung and the chest wall. The former was evidently the correct conclusion, as the patient went through an ordinary attack of pneumonia, and all the signs, such as bronchophony, pectoriloquy, disappeared in a few days.

I would here remark that, according to my observations in left-sided pneumonic empyemata, the heart is not displaced so early as in ordinary left-sided pleurisy. This was especially noticed in the case the chart of which I have shown you. There was a considerable collection of fluid before much change in the situation of the apex beat was noticed. It is probable that this is due to the presence of a partly solidified lung on the diseased side, and on that account the heart is not so readily drawn over to the healthy side. This would appear to confirm the opinion of Dr. Douglas Powell as to the cause of cardiac displacement when fluid exists in the pleural cavity.

Now, I do not wish to say much as to the treatment, as that will be fully taken up by the surgeon.

On account of the greater amount of fluid which is usually present in the streptococcus form, the drainage must be thorough, and in the end an Estlander's operation may be required. In the pneumonic form, recovery will sometimes take place after aspiration, but it is best to drain such cases under almost any circumstances.

Now, as to the less common form of empyema, it will be noticed that the staphylococcus is found in but a small number of cases. It is sometimes secondary to osteomyelitis and pyemia, and is sometimes the result of the introduction of germs from without, either attached to a foreign body, or in a surgical operation carelessly performed. In twenty-five per cent. of the cases either the tubercular or putrid variety is present. In the tubercular form, the character of the fluid depends upon whether pyogenic germs are found in addition to the tubercular bacilli. The contents are serous, with masses of fibrin undergoing fatty degeneration, or they are purulent.

The putrid may occur as secondary to other forms—sometimes from the introduction of the germs of putrefaction from without, and sometimes occurs when no such avenue can be discovered.

I have thus briefly outlined the various forms of empyema as classified in this way. As stated at the commencement of this paper, this classification was largely based upon Dr. Netter's investigation of 109 cases. I am very much interested to know if these results will be confirmed by future investigation, and would ask the members of this society, when they are treating cases of empyema, to have the fluid which is first drawn off examined, so as to determine the particular micro-organism which may be present.

CLIMATES FAVORABLE FOR CONSUMPTIVES.*

BY DR. P. H. BRYCE,

Secretary of the Provincial Board of Health, Toronto.

WHEN so much has been said and written on the subject of climate in its relations to the treatment of consumption, it seems very difficult to attempt to lay down, within the limits of a single paper, any details likely to be of practical value as a guide to the selection of a climate to which we may, from Canada, send any patients afflicted with the disease.

In order, however, that we may at all properly discuss climate in its relation to phthisis, it becomes necessary to enquire into the influences which seem to be beneficent or maleficent in their effects upon the respiratory tract, thereafter indicating such districts as may seem to have climates most favorable to the maintenance of a healthy condition of the air passages.

Writing at a time when a specific influenza is epidemic, there being in many households in Toronto a large percentage of their members ill with the disease, it seems most natural that we should enquire into some of the atmospheric conditions favoring the spread of this catarrhal fever. This enquiry seems proper, from the fact that most are probably agreed that it is upon the hyperemia and increased secretion of the respiratory mucous membrane that the inoculation of the body with the bacillus of tuberculosis through the air passages takes place. This is only saying what we recognize as true with regard to inoculation with the microbe of influenza, diphtheria, or scarlatina.

What, then, is this common atmospheric condition which, apart from dust or other particular irritating substance, induces this almost universal hyperemia at certain seasons, or, rather, under certain atmospheric conditions?

Primarily, it is, I believe, a damp atmosphere, under such conditions of temperature as to first chill the mucous surface by too rapid abstraction of its heat by conduction, and thereafter cause a venous stasis and hyperemia through the reflex influence of the vaso-motor system.

Various temporary or localized influences may increase this effect of damp, cold air, such as high winds out of doors and draughts indoors.

* Read before the Toronto Medical Society.

A second and, I believe, extremely potent cause in the production of this hyperemia in this cold northern climate is the undue abstraction of moisture from the respiratory tract, notably that of the throat and nose, by the excessive dryness of house-air in rooms heated with hot-air furnaces. The result is localized congestion of the mucous membrane, to which chilling by evaporation is added, along with local draughts owing to the air coming in at the registers not infrequently at a temperature of 120° or even 170° F. The dust which too often accompanies this hot air must be added as an additional influence.

On such irritable and congested mucous membrane we have the potent influence of the damp outdoor air; and to further illustrate the effect of an atmosphere rapidly changing in temperature, I have only to recall the readiness with which colds are caught on a summer evening after sundown by susceptible persons sitting on a balcony when the dew has begun to fall, through the rapid chilling and saturation of the atmosphere near the earth by the radiation of its heat. It is, further, hardly necessary to refer to the universal testimony that seashore and lakeshore localities in northern latitudes are places where catarrhs are most prevalent. That this condition seems to similarly tend to the prevalence of consumption, the statistics of the north Atlantic coast cities both of Canada and the United States as well as the lakeside cities, seem amply to prove.

RELATIVE PROPORTION OF DEATHS FROM PHTHISIS PER 1,000 OF POPULATION IN ONTARIO FOR 1890.

St. Catharines	2.7
Toronto	2.3
Ottawa	2.2
Kingston	2.1
Belleville	1.5
Hamilton	1.4
Woodstock	1.4
Berlin	1.3
London	1.2
St. Thomas	1.1
Brantford	1.0
Guelph .....	.7

DEATHS FROM PHTHISIS IN AMERICAN CITIES.

Chicago	1.6
Detroit	1.3
Rochester	1.7
Cleveland	1.5

Having outlined what seem to me the principal atmospheric influences inducing conditions favorable to inoculation with the bacillus tuberculosis, and premising that where the germs find their readiest victims their presence and multiplication have already or will take place to the greatest extent, it will now be proper for us to enquire concerning climates where conditions more or less opposite to these as regards atmospheric moisture prevail, as to whether they have been shown to be superior in their curative influence upon consumption, judged by the experience of invalids sent to them, and by the immunity from the disease of the resident population.

From what has been said it will be apparent that natural dryness of the atmosphere is, under ordinary conditions, the element which would seem to occupy the first position as regards a climate favorable to consumptives.

ATMOSPHERIC DRYNESS.

Stated in general terms, many have said that an atmosphere having from 70 to 75 per cent. of relative humidity or of saturation approaches most nearly an atmosphere normal for respiration. This is to say that it does not, by conduction, remove heat too rapidly from the mucous membrane ; while, on the other hand, it does not, as an unduly dry air, remove heat too rapidly by evaporation. This statement, while generally correct, is only true within a moderate range of temperature.

Such a temperature is that which prevails during the bright sunshine in the early afternoon in climates at slight elevations above the sea level, as in our own climate. It is dependent upon several factors :

- (a) A normally dry soil.
- (b) A moderate temperature.
- (c) No great rarefaction of the air by altitude.

With a soil naturally dry, evaporation does not, during sunshine, create saturation of the atmosphere, nor the chilling effects of a soil made cold by the abstraction of heat ; while the expansion of the air by decrease of pressure, as in high altitudes, is not so great as to lessen notably the normal relative humidity.

This favorable condition is changed during the day by a moist air blowing from the sea or lake, with cloud formation by a wet soil, along with a cold wind springing up.

It is, therefore, apparent that sunshine prevents saturation, while high elevation, by rarefaction, tends to prevent the same. These varying conditions may be successively illustrated. For instance, the central plateau of Ontario, as around Mount Forest and Guelph, has notably less moisture and more sunshine than districts around our lake shores. It is inland fifty miles, with an elevation of 800 feet above Toronto. Again, Aiken, in South Carolina, some twenty miles from the Savannah River, though not

more than 600 feet above the sea, or about the level of Lake Erie, is situated on what are known as the "sand barrens," where it may rain two days, and by noon of the third the soil is practically dry. The climate is wholly different from that along the Savannah; for, while the southern gray moss (*Tillandsia*) grows freely at Augusta on the river, it has not been found, and will not grow, at Aiken.

Ascending again gradually from the level of Kansas City toward the foothills of the Rocky Mountains in Colorado, one finds a tract of reddish soil or disintegrated granite rock from the mountains forming great arid tracts, from 2,000 up to 4,000 feet of altitude, so dry as to show little sign of vegetation, except bunch grass, sage bush, and cactus. There, ordinarily, no dew falls, and only with the autumnal and spring rains does the air ever reach the point of saturation. In this there are two factors: first, the Rocky Mountains intercept the winds from the Pacific, precipitating their moisture on the western slopes; and, second, the altitude so increases the rarefaction of the atmosphere that the clear atmosphere allows the sun's rays to raise the soil to such a high temperature, often 150° F., that even the extremely rapid radiation at sundown does not reduce the temperature (though often a fall of 40 degrees) of the air at the dew point.

Conditions similar to this latter prevail on this continent, very generally, on the eastern slopes of the various ranges of the west, and to a less extent to the east of the Central Appalachian range in latitudes from Virginia southward.

From the further fact that the diluvial deposits of clay of the post-glacial period do not extend south much beyond the Ohio, we find that, except where alluvial deposits are found in the river valleys, the great portion of the soil is of a permeable arenaceous or sandy character, and that Tennessee, Virginia, and the Carolinas are characterized by immense areas of such soils, extending far up the mountains, which are clothed everywhere by one class of vegetation, viz., oak and pine.

The presence of these forests leads me to refer to the influence which forests exert on climate. From time immemorial, their protecting influence against winds has been taken advantage of; but they have another most important influence in preventing climatic extremes. They at once protect the earth from becoming excessively heated during the day through absorption of the sun's rays, while, on the other hand, they prevent rapid chilling by radiation after sunset, inasmuch as they have about them a more or less moist atmosphere, due to evaporation from the leaves, which atmosphere is kept warm through the heat given off from the constantly ascending currents of warm sap from the roots. The common fact is well known to every one that with the close, overshadowing boughs of pines and

firs, even in our own moist climate, dew does not form beneath them till toward early morning, and then but slightly. Where, therefore, such sandy soils exist with large forest areas of evergreens, we have warm currents constantly flowing over the surrounding districts, producing remarkably equable climates, not unduly dry, and remarkably free from the extremes which mark the bare slopes of many parts of both sides of the western ranges of mountains, and which I have found most markedly present in the high altitudes of the mesa or tableland of Central Mexico, from 4,000 to 7,000 feet above the sea. At the time of my visit to Mexico last year, there had been scarcely any rain for two years. Lofty ranges of mountains, from 10,000 to 14,000 feet above the sea, bound the tableland on either side. These have been almost denuded of the forest since the intrusion of the Spaniards. It is arid plain below, and a sky absolutely cloudless above. The sun in midwinter is hot at midday, shining through an atmosphere absolutely clear and diathermanous. So powerful, indeed, are the sun's rays that one feels hot on one side of the street, but passing to the other for shade he at once feels chilly, so great is the difference of temperature. This great change of temperature becomes general at sundown. So powerful is the chilling effect of the rapid radiation at sundown that the prudent go within doors for a couple of hours, or else, like the peons, draw their serapis or shawls more closely around them, carrying a portion with one hand over their mouths for protection—a practice so necessary that it is a habit they fall into even during the daytime. It is hardly necessary, then, for me to say that, along with dryness, I place equability as a most important factor in estimating the value of any climate.

EQUABILITY OF CLIMATE.

This quality I refer to rather in its diurnal than in its seasonal relations. It is, as we know, quite possible for the physical system to become, by degrees, habituated to the extremes between winter cold and summer heat, as seen in Canada; but it requires much robustness of constitution to withstand the extremes which may take place within a few hours, or, as in these high altitudes, within an hour or two. And here I desire to point out a fallacy which too many, in praising the virtues of particular climates, are constantly resorting to. They take the daily or monthly means of temperature for a year, and then, if they find a high average, they speak of the moderate climate. As a matter of fact, such climates may be, as regards physical effects, extreme climates; since it is the changes within a few hours, not days, which affect health.

To illustrate the latter, I may refer to my first experience in high altitudes. At Las Vegas, in Mexico, the Mexico and Santa Fé Railroad Company has established a modern, splendidly equipped, hotel, the

Montezuma, in a canon, where are the *aguas calientes*, or hot springs. Arrived at 9 a.m., the air on the piazza was cold and bracing. The next day a walk up the canon was hot overhead, but dry air prevented visible perspiration. Under the shadow of a projecting peak boys were skating on the dammed-up mountain stream, and yet native women went about the house, and in the sunshine, barefooted. At 5 p.m. in November the sun was disappearing behind the mountains; the cold air currents from the cooling mountain side made sitting on the piazza uncomfortably chilly, and I had to go within doors, and found sitting in front of a log-fire not uncomfortable.

It is quite apparent, therefore, that equability, with dryness, can only be attained either (*a*) at low altitudes; (*b*) at altitudes through the protecting influence of forests; or (*c*) protection by going indoors as the sun goes down.

In the preceding remarks reference has been made to dryness with elevation, and the conditions connected therewith. It may now be well to refer to the one feature of elevation which is so frequently referred to owing to its directly physiological effects. I mean

RAREFACTION OF THE AIR.

It is manifestly difficult to separate this from the other necessarily associated conditions as regards its beneficial effects. Although atmospheric dryness may be artificially produced, yet we know that no pneumatic chambers of such a size as to maintain a reduced pressure with the concomitants of space for exercise, sunlight, etc., are practicable; and I am inclined to think that rarefaction *per se* has not so positive a value as some physicians, writing on high altitudes, would lead us to expect. That altitude produces very definite changes in atmospheric pressure will at once be perceived when it is remembered that at 6,000 feet of elevation the weight of air, compared with that at sea level, is lessened by one-fifth, the barometer standing at twenty-four inches. The effect of this is readily perceived by any one ascending the foothills of the Rockies at the rate at which a railway train travels. Where the circulation is weak its effects are at times most marked, occasionally disastrous, producing, as Jaccoud remarks, hemorrhage in those with affected lungs; while I am personally aware of an elderly gentleman who took so ill at the altitude of Mexico City that he was sent away the day after arrival, as fast as a train could carry him, to the lower levels.

Dr. Denison, of Denver, very properly remarks, however, that "there is an adaptability of these organs in perfect health which more than compensates for a rarefaction of one-fifth, so that only a pleasant exhilaration is felt even with moderate exercise." Observers generally seem agreed

that in cases where altitude is tolerated the system more or less gradually accommodates itself to the changed conditions. The most noticeable effects are (*a*) respiration increased in frequency ; (*b*) increased in depth ; (*c*) increased oxidation of tissues, and greater tissue change ; (*d*) increased chest measurement and lung capacity. Remembering that the air inhaled in high altitudes is generally cool, and that it is raised in temperature in the respiratory tract, it is natural to conclude that there is internally a notable decrease of air pressure, and that increased circulation in the capillaries of the mucous tract is promoted. This, with the deepened respirations, serves to promote more rapid building up of new tissue in the walls of the disease alveoli, and to promote the absorption of the products of hypertrophic changes resulting from localized inflammatory products, whether fibrinous or catarrhal.

I believe these views to be precisely correct ; but they readily suggest to us how careful the physician must be who would recommend his patients to high altitudes. Commonly, the physician has to deal, in a phthisical patient, with a system already anemic, and with the nervous organization in a peculiarly irritable condition. As a consequence, the heart's action is weak and irregular ; the loss of flesh makes the system peculiarly susceptible to rapid changes of temperature, and thus he must ever keep before him the fear of softened and ulcerated tissues in the lungs becoming the occasion of hemorrhages. I, therefore, am strongly of the opinion that the sending to such altitudes any patients other than those in the early stages of the tuberculosis, marked especially by increased mucous secretion, with bacilli present, but without much pus, rapid pulse, with a slight elevation of temperature in the afternoon, and perhaps subnormal in the morning, with some loss of flesh and night sweats, perhaps should not be advised ; but that, instead, the patient should be sent to dry climates of slight elevation—say, from fifteen hundred to two thousand feet—until, at any rate, degenerative changes in tissues have been checked, or greatly ameliorated, and then only by stages should the patient pass to high altitudes. On the other hand, where there is evidence of a disseminated tuberculosis, showing itself rather in the tubercular cachexia and a wasting due to a catarrhal condition of the stomach, with loss of appetite and malnutrition, it seems probable that a change to altitudes of four thousand to six thousand feet may supply such stimulating effects when the temperature is such as to make outdoor exercise daily possible as to be productive of the very best results.

This reference to outdoor exercise demands further remark. We have heard much, within several years past, of the value of rest in the treatment of phthisis. Of the importance of rest in cases of a peculiarly neurotic character, and especially in cases where degenerative changes, with a high

daily rise of temperature, are present, I think too much cannot be said ; but, in the first, a warm and sedative climate, as in the pine woods of the south, seems specially indicated ; and, in the latter, some similar climate, where the residence can practically become out of doors, or where the patient can be taken daily in a sedan chair into the fresh air and sunshine without any danger of chilling, would naturally be selected.

Having, then, summarized some of the chief characteristics of climate, and some of the varying physical conditions which demand our close attention, we have to ask ourselves, Where are some of the most convenient localities in which these climatic desiderata may be found?

Naturally, starting from the sea level, I place, first :

(A) SEDATIVE CLIMATES.

A sea-voyage from New York to the Bermudas or Nassau from October to May may properly be advised for any who are good sailors. Once in southern latitudes, the continuance of sea-voyages there is likely to prove most beneficial. There is, as we are aware, a very notable difference between the atmosphere on the open ocean and that along seashores in the south. On the sea the air is always in motion ; it is wholly free from malarial and other soil impurities of seacoast resorts ; while the daily range of temperature, owing to the specific heat of water being so much greater than that of the land, removes, in large degree, the danger of colds from rapidly-falling temperatures and chill night air.

(B) INLAND, WARM, AND DRY CLIMATES.

One only requires to take a winter voyage to Charleston or Savannah, and thence travel inland a hundred miles, in order to notice the marked difference between the climate of the coast and that at Aiken, South Carolina, for instance. This town is situated in what constitutes a very considerable tract of country clothed, more or less, with oak and pine, and is called the "sand barrens." I spent most of the months of January and February there several years ago, and can testify to its possessing the qualities of dryness and brightness, and, owing to its slight elevation of 600 feet, of mild, stimulating characteristics. While an occasional day may be chilly—too much so at times for a very delicate person—yet when I say that there was not a single day too cold for some visitors to stand and witness a polo match, you will know it was not very cold. Only two or three times did the ground stiffen with the night's frost. By going into the bridle-paths through the pines, one was able almost wholly to avoid the chilly wind. Thomasville, in Georgia, a hundred miles or so south, might, perhaps, prove rather more favorable for patients more sensitive to cold ; but there, on the other hand, many days in winter become enervating through high temperature. It is not, I understand, wholly free from

malaria ; but there are many tracts in the central high grounds of Florida, southwest from Jacksonville, wholly free from this reproach.

(C) DRY AND MODERATELY STIMULATING CLIMATES.

In many cases where decided progress of the disease has taken place, yet where considerable strength and ability to take active exercise exists—even though hemorrhage and ulcerative changes may have taken place—I am of the opinion that altitudes from 1,000 to 2,500 feet in southern climates, dry, and with abundant evergreen forest to prevent the chilling effects of high winds and of great diurnal variations, will be found not only the most readily reached from Toronto, but also the most satisfactory in their effects upon the patient. I have met in the south chronic consumptives in whom the ulcerative processes have become arrested, but leaving the constitution delicate, whose life gravitates from Aiken or Thomasville in winter to the Tennessee or Virginia mountains in summer. They can find temperatures, by varying the altitude, of whatever degree they may find most beneficial. Many others, again, find elevation such as that of Ashville or Hot Springs in Virginia most suitable throughout the winter. Taking the climate of these latter places as types of available resorts, we find them bright, owing to the height ; drying, owing to height and soil ; stimulating for the same reason, and yet with many localities so surrounded with mountain heights, clothed with pine forests, as to make them largely free from extreme changes, and so far south that out-of-door exercise on most days is quite possible and enjoyable. Both these places, and many similar places in the “Smoky Mountain” district, can be reached from Toronto, *via* Cincinnati, within forty hours by train.

(D) HIGHLY STIMULATING CLIMATES.

These are the so-called high altitude climates. I have already indicated the class of patients who, I believe, are most likely to be benefited at such altitudes. It does not follow that because many who go to Colorado, New Mexico, or Arizona do not have hemorrhage or syncope on arrival that therefore these climates are best suited to them. My belief is that, owing to the diurnal extremes of temperature, because of the great altitude, many systems have a draft made upon them which, while not necessarily preventing progress, prevents them from receiving benefits equal to those which, in climates of the second class, are more readily and naturally brought about. These heights, during the summer, may prove more generally available, but I confess to a very great fear for any, except those with incipient phthisis, of the effects of that variability of climate which Denison places amongst the excellencies of a Colorado climate.

(E) DRY CLIMATES OF LOW ALTITUDES.

It would be unpardonable in me to pass over the climates which multiplied pamphlets and guide-books speak about as earth's paradise, in the various valleys of Southern California. I have not had the good fortune to cross to the west of the Rockies; but a climate which can grow roses at Christmas, have strawberries in February, require a blanket on a summer night, and yet supply, within an hour's time, altitudes from 1,000 feet to wooded canons 4,000 feet above the sea, with a glacier in sight at 14,000 feet, does seem to possess many of the attributes making it "open sesame" to the Elysian fields.

All writers seem agreed that the San Gabriel valley, and other similar valleys in about the same latitude, of 35° N., running mostly northwesterly, and sheltered on the north by the foothills of the Coast range, and on the east by the Sierra Madres mountains, are the particular centres of this Edenic land. There seem only two particular blots on this paradisaical picture, the one being the fogs which occasionally arise owing to the moisture from the ocean meeting a cold mountain current, and the other being dust winds, which sometimes blow for several days together, and are irritating, hot, and very disagreeable. These arise from the fact that the whole plain country, where not irrigated, is almost devoid of vegetation, except sage bush and cactus; in fact, is a partial repetition of what may be seen on the foothills of eastern Colorado and New Mexico.

Further inland, however, are found wooded canons which, I can readily imagine, possess an almost ideally perfect climate, and are yearly becoming the homes of hundreds in search of health, and who are making a living there by ranching and fruit-growing.

This climate presents what have seemed to me the great desiderata, viz., dryness, equability, and warmth, without excessive heat. While having practically the same yearly mean as the far-famed resorts of the Riviera, *i.e.*, 60°F., there is a notable difference in that the average for January in San Diego, Santa Barbara, and Los Angeles is 53°F., and for August 68°F., while Mentone has 48°F. as the January mean, and 75°F. for August.

In concluding, I have but one other remark to make regarding the advice which we should give our patients in sending them away to health resorts; and this is: "To avoid, absolutely, residence in the larger towns and cities, and to obtain quarters, even if camping be necessary, in rural or suburban districts, wholly away from the air of towns." This should be urged for several reasons: first, the air of hotels and boarding houses, the resorts of consumptives, or indeed of any persons congregated together, is impure, and becomes daily more so; second, a morbid curiosity is soon aroused in other invalids, and the mind of the patient becomes introspective, dwelling upon the relative degrees of his own sickness and wellness as com-

pared with his neighbor ; and, third, because life in rural parts, owing to the absence of society, of hotels, etc., forces the invalid out of doors, where he not only gets sunlight and exercise, but also develops an interest in things having a healthful influence from their diverting the attention from his own ailments.

As I believe that as it is comparatively seldom that any persons having tuberculosis at all developed can, at any rate for years, return with safety to our damp, raw, northern climates for permanent residence, I think that patients should be prepared for this, and should be advised that so soon as at all possible they should engage in some light out-of-door employment for the several objects of maintaining themselves, obtaining exercise and the fresh air necessary to promote nutrition, and last, and perhaps most important of all, of curing mental occupation, and an interest in the life about them, the only preventive against the ennui and nostalgia, the hardest of all symptoms to alleviate in our chronic invalids.

Selected Articles.

TWO GUY'S SURGEONS.

JOHN HILTON AND EDWARD COCK.

IT is too much the fashion among the younger generation of professional men to associate eminence in surgery with some new method of procedure or some brilliant achievement in the way of an operation never hitherto thought possible. It is not remembered that the day after tomorrow the method will be supplanted by another, and the operation will be discarded as useless or unjustifiable. In surgery, as in medicine, true greatness consists rather in the power of applying a wide and accurate knowledge to the elucidation of the numberless problems suggested by an extended clinical experience, in maintaining that balance of judgment which can withstand the temptations to adventurous brilliancy without becoming stagnated in the slough of servile adherence to tradition. The men who really leave their mark on surgery and truly advance it in the interests of mankind are not so much the laboratory investigators as the clinical observers—men who have the acumen to perceive, the industry to collect and record, the intellect to reason from and compare the ever-changing phases of disease as they modify and are modified by the ever-varying individuality of the patient. If we look back at the history of surgery, it will be found that the men who have left their mark are not the brilliant operators or learned investigators, but rather men who continually devoted great ability to the work of their profession, to the solution of the questions which daily presented themselves for interpretation. They were men who spared no pains in their work, who shirked no difficulties ; but they were men who ever placed the patient in the first place, and looked upon operative brilliance as the means to an end.

Looking at the matter in this light, it is with the very greatest pleasure that we find the last volume of the Guy's Hospital Reports opens with appreciative accounts of those two eminently practical and clinical surgeons, John Hilton and Edward Cock. Mr. Jacobson, from his associa-

tion with the later editions of Mr. Hilton's celebrated work on "Rest and Pain," as well as from his personal qualifications, is peculiarly well fitted for the task of delineating for us the portrait of the great Guy's surgeon. The task has been discharged in a most fascinating way, and one of the principal reasons which we had for referring to the matter here was to draw the attention of those who may not happen to be subscribers to the Guy's Hospital Reports to this most interesting and instructive biographical note. Hilton's character, method, and manners are faithfully depicted, and rich stores of anecdotes and recollections are gathered from all available sources. That wondrous association of "Anatomical John" with Joseph Towne, which resulted in those marvellous models of which Guy's is so justly proud, is vividly described. Hilton's method of applying his vast knowledge of anatomical detail to the interpretation of clinical symptoms is fully illustrated. Some of the stories relating to the earlier portion of Hilton's career and his relations with other members of the staff give a most instructive insight into the ways and manners of half a century ago. The relations of the surgeon to his dressers and students are the occasions for many amusing anecdotes which give us an insight into the reason why, in spite of manners which were brusque to the verge of brutality, and in spite of a sarcastic form of expressing his disapproval, which is always most galling to subordinates, he succeeded in inspiring a respect and reverence which have long survived his death. Guy's men should all read this biographical record of one of the greatest of the great men who adorned the Borough Hospital; all interested in the history or practice of our art should avail themselves of this opportunity of gaining an insight into the records of the past, and of perceiving that the true methods of the craft never become obsolete—that, like the "milk-white hind," they are immortal and unchanged.

Hardly less interesting is the paper which Mr. Lucas devotes to a sympathetic account of Edward Cock, who, though senior to Hilton in his appointment to the staff, was a more familiar figure to Guy's men of the present generation from the fact that up to near the time of his death, in 1892, he was a frequent visitor to the operating theatre of his old hospital. Even those who never exchanged a word with him seemed on terms of friendship with the genial old man, whose ready smile and well-known stammer were familiar to all. Around this appropriate personality there had sprung up a vast number of mythical anecdotes among the students, who were ever ready to relate some new specimen of "Teddy Cock's" humor. With that dexterous mastery of phrase which all old members of the Guy's Physical Society associate with their former secretary, Mr. Lucas touches upon this penalty which almost inevitably attaches to a certain kind of popularity.

But Mr. Lucas speaks with the authority of one who knows by experience the value of Mr. Cock's teaching when he deals with the practical questions raised in forming an estimate of that great surgeon's claims upon the gratitude of posterity. It will be evident that Mr. Cock belonged to a different type from Mr. Hilton. He did not, apparently, possess the same originality of mind, or the same power of generalization by induction, which were such striking features of the author of "Rest and Pain." He was rather a man of thoroughly sound common sense, capable of devoting his attention to the actual problem before him, and of carrying out the measures which his judgment and experience suggested with a bold and skilful hand. Mr. Lucas gives an excellent account of that procedure known to Guy's men as Cock's operation, and points out in a very lucid and able way the uses and limitations of that method. It is clear that any dispute as to priority or doubt as to the practical advantages of this operation arises altogether from a misconception as to the nature of its performance and its intention. In another paper in the same volume of the Reports, Mr. Golding-Bird gives an exhaustive account of his experiences in eighteen years in Urethral Surgery at Guy's Hospital. In this paper the value of Cock's operation in suitable cases is very clearly and forcibly exemplified. To those who want information on this subject, we can advise a perusal of Mr. Golding-Bird's paper, and Mr. Lucas' remarks; but to those who wish to be entertained by two interesting and amusing biographical sketches, we can safely recommend Mr. Jacobson's account of John Hilton and his colleague's biography of Edward Cock. There is one quotation from the latter paper which may amuse the students of Heredity: "Like his distinguished uncle, Cock died childless. So did Thomas Carlyle, and the brilliant Earl of Beaconsfield, whilst the sons of the latter's great rival appear to illustrate Mivart's law of the necessary retrocession to an ordinary type. I have often thought what a misfortune it is that genius cannot be grafted like tender fruit on the quince or paradise stock, or budded like the rose on the stem of the wild briar. Until some such method is discovered, the fool of the family will be always first in the field, digging at the roots of the tree of reproduction to ensure the continuance of his follies, whilst wisdom is turned aside, and knowledge is uprooted. Then genius, tender plant, exposed to wind and storm, shrivels and dies, leaving only the spirit of its past."—*The Medical Magazine*.

LETTER FROM MR. LAWSON TAIT.

WE reprint the following letter, written by Mr. Lawson Tait to the editor of the *Buffalo Medical and Surgical Journal*. The matters discussed therein are of considerable importance to the profession at large, and it allows Mr. Tait a means of putting his views correctly before us:

SIR,—In the number of your valuable *Journal* for the current month, I have just read an interesting paper by my friend and former pupil, Dr. F. Byron Robinson, which requires a little notice, for I think he is hardly fair to me, or to my brethren on this side of the Atlantic, when he says that few of us engaged in abdominal surgery give much attention to the kidneys in their work.

His paper has a most suggestive interrogatory title, "What Kills Patients after Laparotomy—Anesthetic, Nephritis, or Infection?" Dr. Robinson hardly answers his own question, nor does he make quite clear his intention in asking it; but it is sufficient for my present purpose that he does ask it, and that he does so without that full information which I thought he possessed after his long residence with me. I, therefore, desire to supplement some of his remarks.

I need not stop again to protest against the continued use of the word "laparotomy," which can be used properly for operations involving incisions made in the flank, and cannot be extended to anything like an ordinary ovariectomy, and I therefore pass at once to the question at issue, rejecting this objectionable phrase.

In order to place myself historically right, let me say that it is now about twelve years since I made the discovery that the anesthetic administration of ether in the human subject may—certainly does, in some instances—completely arrest the flow of urine during its administration. The discovery was made by accident in a case of great rarity, a uretero-uterine urinary fistula, where I failed time after time because I missed the fistula. This was due to the fact that I used ether, and therefore thought I had closed the aperture, when I had only temporarily arrested the flow of urine at the very time I most needed the guidance of its misdirected current. I then used chloroform, closed the fistula properly, and cured the patient.

In operating on several bladder cases immediately after this incident, I had opportunities of confirming the experience, and these facts set me thinking. At that time a great enthusiasm had set in for the use of ether, a prejudice had steadily grown against chloroform, and I had, unfortu-

nately, been carried away with the stream. But my new fact set me thinking, and my thoughts drove me into a careful research of a number of fatal cases of operation where no complications of the operation could account for the deaths, but where the fatal results were found to be due to pulmonary and renal lesions, some known to have been in existence before the operation, others not suspected or not possible as antecedents.

I appealed to my friend and colleague, Dr. Robert Saundby, now known as one of our greatest authorities on renal pathology, and then our acting pathologist, for assistance, and that was promptly and abundantly given. He had known for years that degenerative changes in the kidney were very commonly associated with all abdominal tumors. Dr. Saundby and I had discussed the fact often before 1878. I knew perfectly well that many operators refused to undertake cases where the coarse test of the presence of albumin in the urine seemed to indicate serious kidney disease. But I had steadily set my face against ever refusing to operate on any case whatever, and, therefore, disregarded this apparently ominous sign. The result was that I scored a great number of brilliant successes in cases refused by men then at the head of my department. But I met with equally disastrous failures in cases where I could not see that anything was wrong with the operation, and where Dr. Saundby, and, subsequently, Dr. Foxwell, steadily reported "kidney degeneration and pulmonary edema."

Then two cases occurred which put a great light on the whole thing, a light which ought to have been admitted before, and would have been recognized long before, but for that most unfortunate habit we adopt of moving restlessly about in streams of fashion, giving to no proceeding and to no plan a systematic and logical investigation. The cases were, briefly, these :

A young Irish girl came to me with an enormous ovarian tumor, which had been tapped over and over again, the radical cure having been refused to her by no less than five leading surgeons in Great Britain alone. Her legs were so enormously swollen that no kind of joint flexion was possible, and no vaginal examination could be made, on account of vulvar edema. She passed only about twenty ounces of urine in each twenty-four hours, and quite half of that was albumin. According to our notions at that time, nothing could be more unpromising, but I undertook the operation. On thinking over the special conditions of the case, I remembered Simpson's great belief in chloroform as a remedy for the extreme conditions associated with albuminuria, especially the eclampsia of the puerperal woman, and the convulsions of the post-scarlatinal nephritis. I determined to give this case chloroform, and she got well without an interruption, the albuminuria disappearing as rapidly as her

convalescence progressed. In three months she was a strong and perfectly healthy woman.

The other case was that of a strong young woman of thirty, with a rapidly-growing soft, edematous myoma. All her visceral functions were healthy, so far as could be determined, before the operation. I did hysterectomy, the patient being under the influence of ether. She passed very little, and highly albuminous, urine after the operation, and she never drew an easy breath after she came out of the anesthetic. Death occurred on the fourth day, and *post-mortem* examination showed that she died of acute pulmonary edema, that the kidneys were quite healthy, and that the ureters were quite uninjured, and far away as usual from the clamp wire. (I had feared they would not be found to be so.)

This was a lesson which could not be misunderstood, and I immediately published my experience, which received many important confirmations, to the effect that ether had secondary results of an extremely risky kind on the kidneys and on the lungs, but the utterance made but very little impression. My experiences were summarized and published, in 1884, in a paper entitled, "A Series of One Thousand Cases of Abdominal Sections," as follows, and I thought then, as I think now, that they were the most important sentences I have ever published in my life :

"The question of the best anesthetic for use in abdominal surgery is one to which, of course, I have given a very large amount of attention, and it is very singular that in the class of drugs, the action of which there can be the least doubt about, we are, as yet, certainly very unsettled in our views. Like all pupils of Simpson, I began my professional life with a most profound belief in the advantages of chloroform over all other anesthetics. I have never seen an accident from chloroform, but, partly by reason of the fear of inquests, and partly by the example and teaching of Dr. Keith, a belief grew in my mind that ether was preferable to chloroform, and, at first, I had the impression that the sickness after ether was less marked than after the use of its rivals. I was not, however, very long in discovering that ether has special risks for people with a tendency to bronchitis ; and later on I discovered, and have already published the fact, that during the administration of ether the secretion of urine is completely arrested. It was subsequently very forcibly impressed on me that, for patients with damaged kidneys, ether is a dangerous anesthetic ; and although I cannot say that I have seen any fatal results arising from this peculiarity of its action, I certainly have had abundant cause to fear it. My first alteration, therefore, in my views concerning ether was to limit its application to patients under forty, but even after this I found my confidence in its safety greatly diminished by the fatal occurrence of bronchitis in a case of hysterectomy in a woman aged thirty. In this case

the patient's breathing was embarrassed from the moment she recovered from the anesthetic, her urine was scanty, and became ultimately albuminous, and she died on the fourth day from suffocative catarrh, the *post mortem* showing that, so far as the operation was concerned, everything was perfectly satisfactory."

These utterances attracted very little attention, and my example was very little followed, if at all. The reasons were two: First, that crowds of experiments on animals had just been published, in which it was proved that, so far as animals were concerned, ether was a safe anesthetic, and chloroform was not. Even if this conclusion were correct, and for many reasons I doubted and still doubt it, I urged the plea that what was true about animals need not be, and was not, true about human beings, and that no animal was known which suffered from chronic renal degeneration or which died from acute pulmonary catarrh. Nobody would listen to me, and my arguments were put down as those of a crank who had strong views about experimenting on animals. My views on this subject were entirely misrepresented, as they have been again, and quite recently, by the editor of the *British Medical Journal*. I am content to leave the quasi-moral arguments alone, and I confine myself to my own department, that of surgery, and I said fourteen years ago what I say now, that, for surgical purposes, experiments on animals are wholly untrustworthy, and have been, in very many instances, grossly misleading. I have never said anything more, and no amount of bullying or ridicule will make me say anything less. So much for the first reason of the neglect with which my utterances on anesthetics were received. My only comfort is that, last year, I induced the Council of the British Medical Association to exclude from their officially-conducted research on anesthetics all experiments on animals.

The second reason was a stronger one. England is emphatically the land of coroner's inquests; and, considering also it is the land which has established the freest and yet most responsible system of jurisprudence the world has yet seen, its people stand an amount of nonsense from coroners and their juries which is most astonishing.

The thing which an English practitioner hates above everything is a coroner's inquest upon any incident in which the conduct of his own practice may be called in question. Coroners seem always fond of making public enquiry into cases of death under an anesthetic, as there seems to be ingrained in the public mind, from the ridiculous misrepresentations they see on the stage and read of in novels, that anesthetics may be used for purposes of rape and robbery. Every such death is, therefore, blazoned abroad until the use of chloroform has become a *bête noire* of surgical practice alike for practitioner and patients. Chloroform,

when it kills, which it does very rarely, kills on the instant, and, in England, there is an inquest. When ether kills, which it does far more frequently, it kills some days after its administration, and there is no inquest, not even an inquiry. In Scotland there are no coroners and no inquests, and, as it is universally known and believed there that chloroform is far safer and better than ether, the former is used and the latter is not.

To get over the difficulty, I began to use a mixture, and soon found that it was a great advance over either of the two anesthetics used separately. I vary the proportions according to age, increasing the proportion of chloroform from one-third to two-thirds rapidly after forty, and in case there is any suspicion of renal or pulmonary incompetency.

Twelve years' experience has driven entirely out of my practice all those disasters which ether brought into it. In a number of administrations, now amounting to a great many thousands, not a mistake has occurred, and alarms occur only where some new and inexperienced administrator will indulge in such fantastic tricks as pushing back the tongue by pressing up the jaw, or violating, in some other foolish way, the simple rules for administration laid down over forty years ago by Simpson, not one of whose methods has yet been surpassed.

I have also this advantage, that when compelled to operate with the assistance of some practitioner in the country, whose opportunities of administering anesthetics are few and far between, I hand him my anesthetic, with the usual remark that it is an ether mixture; he goes to his work with confidence devoid of fear. If I told him that it was chloroform, his hair would stand on end, he would think of nothing but an inquest all the time, and I should never have the patient properly under from beginning to end of the operation. In fact, I should have all the elements of danger, as Simpson lays them down, arrayed against me.

Further, in discussing details of an operation with women patients, half of them want to know if they must take chloroform, because they are sure their hearts won't stand it, and they have been told this, that, and the other. "Ether mixture, far better and safer than chloroform," settles the question, and calms their morbid imaginations.

Perhaps you will permit me, in another letter, to reply to the third part of Dr. Byron Robinson's question concerning infection. Meantime, accept my assurances of respect, and believe me, yours sincerely,

LAWSON TAIT.

The Crescent, Birmingham, Eng., Dec. 9th, 1893.

Clinical Notes.

SUPPURATING MYOMA OF THE UTERINE WALL FOLLOWED BY TWIN PREGNANCY.

By JAMES F. W. ROSS, M.D.,

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THE following notes are taken from my case book :

Mrs. J., æt. 28, kindly referred to me by Dr. Stevenson, of Trenton, admitted July 22nd, 1891. Nothing unusual about menstrual history; was married two years ago; had a child born in May, 1891, good delivery. Four years ago she had a sickness that was attended by much vomiting; had a good deal of pain in the region of the bladder and pain in passing water—only a few drops of water would pass at a time, and there was a frequent desire to micturate. On the 27th of May her child was born; four days after she noticed a pain in the right iliac region, that shot across the abdomen and across the back; the pain was severe. At first it was constant; it gradually became diminished; and now, July 22nd, only occurs for a few hours every day or night. Since her confinement she has noticed an enlargement on the right side, low down in the abdomen. After the confinement the lochial discharge lasted for six weeks.

Two weeks ago—that is, during the first week in July, and about five weeks after her confinement—a greenish-yellow, thick, foul-smelling discharge commenced to flow freely from the vagina. At present the discharge is thinner, not so offensive, and has every appearance of laudable pus. The discharge has gradually been increasing in quantity. Patient looks very ill; she lies on her left side, as it hurts her to turn on her back. There is pain on pressure over the abdomen, chiefly in the left iliac region; tympanites present; she has an aching pain in the right iliac region. Has been troubled with painful micturition for the last week or two. The urine is found normal.

On inspecting the genitals, I found a large abscess in the left labia majora, and a very offensive discharge of pus from the vagina; the parts were all reddened and inflamed as a consequence of the irritation of the

discharge of this pus. The os uteri was enlarged, and the cervical canal patulous. One finger was passed in, and a large fibroid, about the size of a child's head, was discovered pressing into the cavity of the uterus. The patient was placed under chloroform, and on exploring the interior of the uterus the fingers burst into a horrible sloughing mass, evidently a sloughing intramural fibroid. The cervix was still further dilated, and by means of gallstone forceps and fingers the tumor was scooped out until the surface towards the peritoneal cavity was as much diminished in thickness as was consistent with safety. The hemorrhage was free, but the uterine cavity, and the cavity of the tumor, were tamponed tightly with iodoform gauze tied into knots, together with vaginal packing, and a pad and bandage to compress the genitals.

The abscess in the left labia majora was freely incised, and a large quantity of pus evacuated. The uterine cavity was douched out twice daily for a few days, and the uterine cavity re-packed with iodoform gauze. The patient made an uninterrupted recovery. One would have thought that the uterus of such a case would be so much weakened by such a large growth in its wall that pregnancy would scarcely be carried through at any subsequent period with safety. The tumor had a very broad attachment, and was not one of those intra-uterine fibroids with a pedicle, but bulged out into the abdominal cavity, so that the junction of the uterine muscular tissue could be distinctly felt above and below it by a depression. The uterine wall was implicated from the fundus to the internal os.

The reason I relate the history of the case at this late date after her recovery is owing to the fact that I have just received a letter from her medical attendant, who states: "Mrs. J., the patient of mine on whom you operated, has since been safely delivered of a pair of twins. She made a good recovery, and is in good health."

CEPHALHEMATOMA.

By H. MORELL, M.D., C.M.,
STAYTON, MINN.

ON May 14th last I was called to attend Mrs. L., a primipara. On examination, everything was quite normal, and labor was terminated in about three hours. While inspecting the child, which was of the female sex, I found a swelling on the right parietal eminence. I thought, in my hasty examination, that it was an ordinary caput succedaneum, and told the parents that it would disappear in a few days. I did not take any more notice of it until about two weeks after, when my attention was drawn to it by the child's mother, who was very much alarmed. On inspection, I found that the tumor, instead of diminishing, had increased in size, and was of a harder consistency than before. It did not pit on pressure like the ordinary tumor of the head, but it was a *distinctly fluctuating* swelling about the size of a small orange. At first sight it looked like a congenital prolapsus of the brain (*hernia cerebri congenita*); but, as it did not extend over a suture or fontanelle, nor bulge or become tense when the child cried, that idea was dispelled. There was now only one thing that it could be; that was a blood humor, or cephalhematoma. This occurs, at the most, twice in one thousand newborn children. Cephalhematoma is a painless, soft, elastic, *distinctly fluctuating* tumor upon the scalp, and is produced by an extravasation of blood between the pericranium and bone. Vogel says "that the extravasation most probably occurs during the delivery; for, as early as the first day of life, when the common caput succedaneum begins to disappear, a very distinct swelling is noticed, which remains from the fourth to the sixth day, at the longest, when the tumor, of the size of a ripe apple, is discovered upon one of the parietal bones. Usually, it is observed on the right side. It never extends over a suture."

Treatment. The tumor was left alone, with the exception of a little vaseline rubbed on once a day. In about four months it completely disappeared. During the whole period the child was in the best of health. Compression, puncturing, and incisions only cause danger, through irritation of the scalp and exposure to the air of bones denuded of periosteum.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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TUBERCULOUS PLEURISY.

The following is reprinted from the "Transactions of the Massachusetts Medical Society," being the Shattuck lecture for 1893 (Wm. Osler):

Of 101 cases of pleurisy examined *post mortem*, thirty-two were definitely tubercular, and thirteen existed in patients with tubercular lesions of the lungs without any definite proof of the tubercular character of the pleurisy. By far the commonest forms of pleurisy were sero-fibrinous or fibrinous exudation, secondary to acute disease of the lungs, or occurring at the termination of chronic affections of the heart, arteries, or kidneys. The author recognizes the following *clinical types*:

(1) *Acute tubercular pleurisy*. These are rarely fatal, a large majority completely recovering, a few becoming chronic, and a variable number developing tuberculosis of other organs later. These may be divided into three groups: (a) Acute tubercular pleurisy with subsequent chronic course may set in acutely without anything to suggest tuberculosis. After a series of tapplings the patient may recover, with evidences of thickened pleura. Recurrence and ultimate infection of the lungs may occur. (b) Secondary and terminal acute tubercular pleurisy may occur in the course of pulmonary tuberculosis, or at the end of some chronic disease, e.g., of the heart, arteries, or kidneys, or cirrhosis of the liver. In these latter there is generally found a tuberculous lesion of the apex or of the bronchial glands. (c) Acute tubercular suppurative pleurisy running a rapid course.

(2) *Subacute and chronic forms*. (a) With sero-fibrinous exudation.

This is by far the commonest, and may occur as a complication of well-marked tuberculosis elsewhere (*e.g.*, in lungs), or be the only obvious lesion; though, in the latter case, a tubercular focus generally exists in the lungs, bronchial glands, or peritoneum. This is a very important class of cases, as the onset is generally insidious, and the character of the disease often overlooked. A certain number ultimately die of pulmonary or general tuberculosis. (*b*) With purulent exudation. Generally subacute in onset and chronic in course. (*c*) Chronic adhesive tubercular pleurisy, with enormous thickening. It is generally preceded by tuberculosis of bronchial glands. The thickened layers may unite in their whole extent from a solid membrane with patches of softening, or a space may be left below filled with fluid. The process may extend into the lung.

(3) *General serous membrane tuberculosis.* A group of cases in which the serous membranes are affected, either simultaneously, or, more generally, one after the other, the pleuræ being usually secondary to the peritoneal affection. (*a*) Acute tuberculosis, with rapid evolution of disease in the pleuræ and peritoneum, generally consecutive to disease of the tubes in women, or of the bronchial or mesenteric glands. (*b*) More chronic. Exudation occurs into the pleuræ and peritoneum, with caseation, ulceration, and suppuration. (*c*) Still more chronic, with much fibrosis and little exudation. The course of these serous membrane tuberculosis is often very chronic, with periods of great improvement, and with little or no fever.

As regards the *treatment* of pleuritic effusion, the author believes in a dry diet combined with cathartics and diuretics. Aspiration he recommends at the tenth day, if the fluid still reaches the level of the fourth rib. Counter-irritation he strongly advocates. Pulmonary gymnastics, by means of Wolff's bottle, are useful when there is much thickening of the pleura.—*Medical Chronicle.*

DILATATION OF THE COLON IN YOUNG CHILDREN.

The author (Wm. Osler, *Archives of Pediatrics*, February, 1893) relates four cases in all, the two last being his own. The first, recorded by Formad, was twenty-three years of age, and gave a history of constipation and abdominal distension from infancy. At death the colon had a circumference varying in different places from fifteen to thirty inches, and its weight (with contents) was forty-seven pounds. In a case of Hughes, æt. three years, with similar symptoms and death from enterocolitis, the colon held fourteen pints of water, and its muscular coat was enormously hypertrophied. Rectal enemata only aggravated the symptoms during life.

CASE I. Colored boy, æt. ten years. Swollen and painful abdomen

and troublesome constipation from infancy. Circumference above navel, 63 cm. Visible peristalsis; tympanites; no tumor to be felt; very emaciated. During residence in hospital he had alternating attacks of diarrhea and constipation, tympanites being very troublesome at the latter times, and relieved by irrigation with water by means of a rectal tube passed high up. Greatest abdominal circumference noted was 74 cm. Laparotomy was performed, and the colon found to be enormously dilated in its whole length, but especially in the sigmoid flexure (circumference 45 cm.), which was twisted on itself without causing any obstruction. An artificial anus was made at the most prominent point of the sigmoid flexure. As a result of the operation feces passed freely through the artificial anus, and tympanites no longer existed, and the patient gained flesh. Six months later (at the time of publishing the paper), the operator was considering the advisability of closing the artificial anus.

CASE 2. Child, æt. seven months, normal labor. From the outset no meconium was passed. On examination no obstruction was found, and tarry feces came away when a catheter was passed high up into the rectum. On admission, child well nourished, abdomen greatly distended, and mother says she has seen peristaltic movements. She injects daily a few ounces of water and then passes the catheter, when feces and gas escape, and the abdomen collapses in a remarkable manner. The treatment ordered was to pass the catheter several times daily, so as never to allow distension. Several months of this treatment, however, have caused no improvement.—*Medical Chronicle*.

A VARIETY OF NERVOUS HEMATEMESIS.

Josserand, in *Lyon Médical*, says it has long been known that cases are not rare where blood is apparently vomited without any other signs of stomach or lung disease being evident. As this is most frequent among young adult women with dysmenorrhea, it has been customary to class them as cases of vicarious menstruation. The author, however, has found this symptom in several cases where menstruation was quite normal, though various hysterical symptoms were present. He therefore made some observations on the characters and source of the blood in these cases. The fluid, he says, is less colored than pure blood, as seen when a drop is allowed to stain white linen, though it may seem dark, looked at *en masse*. It is more watery, is viscous and syrupy, and partly adheres to the bottom of the vessel containing it; is not frothy as in hemoptysis, and rarely coagulates. The vomiting is preceded by a feeling of stifling, or epigastric or retrosternal retraction; then the mouth fills rapidly with saliva, and suddenly the blood is expelled all at once, and the

patient feels greatly relieved. This often occurs daily for even several weeks. Careful analysis of the vomited blood shows that it contains one-fifth of the amount of hemoglobin contained in pure blood, while the red corpuscles only number one five-hundredth of those in normal blood. Placed in a test glass it settles into three layers, the lowest being gray-white, and consisting of pavement epithelial cells and cells like salivary corpuscles; the middle layer being thin and consisting of red blood corpuscles partly discolored, while the uppermost layer is deep, slightly pinkish, and, as shown by the spectroscope and other tests, consists of a solution of hemoglobin. The fluid possesses considerable diastatic power, and, on the whole, is a mixture of one part blood with ten or twelve parts saliva.

As to the source of the blood, he says that in some cases pharyngeal varices have been found. Sometimes the larynx is the source, though no lesion other than temporary congestion is present. In several of his own cases varices about the base of the tongue were present. Manon and others have noted the existence of cerebral lesions in some cases. The author thinks, however, that in most cases the blood comes either from the gastric mucosa or from varices at the lower part of the esophagus, and that true hematemesis occurs. The phenomena consist, then, first, of a nauseous pyalism, then a small quantity of blood is poured out and vomited, and in its passage is mixed with the copious flow of saliva. He hence suggests the term "hysterical hemosialemesia."

The fluid is of remarkably constant composition, namely, one part blood with ten to twelve parts saliva, the latter having dissolved out the hemoglobin from most of the red corpuscles, so that though the hemoglobin is one-twelfth of that of pure blood, the red corpuscles are, to a large extent, destroyed, and those that remain are partly discolored. So characteristic is the fluid that he claims that a mere examination of it is enough to justify the diagnosis of hysteria even without seeing the patient. The exact etiology is still obscure, but the author has done good work in so carefully analyzing the cases he has dealt with.—*Manchester Chronicle*.

THE VARIETIES OF PULMONARY TUBERCULOSIS.

Dr. Fowler (Fowler, J. K., in *The Practitioner*, October, 1893) uses the term "pulmonary tuberculosis" for all cases of phthisis pulmonalis of tuberculous nature, and suggests that for these cases the classic designation should be discarded. He classifies all cases of tuberculous diseases of the lungs under the four following varieties, viz.: (1) Chronic pulmonary tuberculosis; (2) miliary tuberculosis of the lungs; (3) caseous tuberculosis; (4) fibroid tuberculosis.

In an examination of one hundred and sixty-six consecutive cases of this disease, he found that one hundred and forty-nine cases were of the first variety, four cases were of the third variety, and thirteen cases of the fourth class. No case of the second variety presented itself.

Chronic pulmonary tuberculosis, then, is, in the author's view, a sufficiently definite designation for the great majority of cases of tuberculous disease of the lungs.

Miliary tuberculosis of the lungs may occur as part of a general tuberculosis; or it may follow the breaking down of an old encapsuled caseous mass in the lungs; or it may occasionally be a primary infection of the lungs through the medium of a softening caseous bronchial gland.

Caseous tuberculosis of the lungs is the term suggested to include acute phthisis, acute pneumonic phthisis, acute tuberculo-pneumonic phthisis, florid phthisis, galloping consumption, caseous, epithelial, or scrofulous pneumonia. It may be a lobar type, or a disseminated type. It may be primary, or may supervene upon the chronic form, or upon an arrested tuberculosis. The distinguishing pathological changes are the presence of areas of consolidation tending rapidly to caseation, followed quickly by softening and excavation.

Fibroid tuberculosis of the lungs. This class does not include cases of so-called "fibroid phthisis," even when tuberculous, these being referred to the class of chronic pulmonary tuberculosis. The most distinctive pathological feature of the class is the fibroid transformation of miliary tubercles. Pigmentation and fibrosis are characteristic of the lesions. Excavation is rare, and, if present, the cavities are usually small and thick-walled. There may be pleural adhesions, but the extreme thickening of the serous membrane, which is such a marked feature of "fibroid phthisis," is absent.—*Manchester Medical Chronicle.*

TABLE GIVING THE RELATIVE FREQUENCY OF THE CONDITIONS
PRODUCING HEART HYPERTROPHY.

	Cases.	Per cent.
Arterio-sclerosis in.....	62	59
Nephritis.....	14	13.4
Valvular lesions.....	13	12.4
Adherent pericardium.....	8	7.6
Work.....	4	3.8
Tumors.....	2	1.9
Aneurism of heart wall.....	1	0.95
Hemic plethora.....	1	0.94

—Howard, in *Johns Hopkins Bulletin.*

THERAPEUTICS

IN CHARGE OF

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A PRECAUTION IN THE USE OF COCAINE AS AN ANESTHETIC.

In a recent number of the *Centralblatt für Chirurgie* we find an abstract of an article by Dr. Gauthier, published in the *Gazette des Hôpitaux*, on a means of preventing the unfavorable after-effects of cocaine when it is used as a local anesthetic by injection. This consists in the addition of one drop of a one per cent. solution of nitro-glycerin to the injection. The author goes on to say that nitro-glycerin dilates the blood vessels of the brain in the same way that amyl nitrite does ; in the course of a few minutes after the injection of two or three drops of a one per cent. alcoholic solution the skin of the face is seen to grow red and hot, the conjunctiva becomes injected, and the patient complains that his head feels as if it were going to burst. M. Gauthier has taken advantage of this action, antagonistic to that of cocaine, for the last two years.—*Medical Record*.

CHLOROBROM IN SEA SICKNESS.—Hutcheson (*The Lancet*, August 12, 1893) states that he used chlorobrom in all cases of seasickness to which he was called while ship's surgeon to the steamship "Rimutaka," during a voyage to and from New Zealand, and speaks of its action as follows: He always gave it in three drachm doses in the second stage of this distressing ailment, when retching, headache, depression, and sleeplessness were the prominent symptoms, the hour selected for administration being ten p.m., in order to secure a good night's rest. The results were very satisfactory. The chlorobrom was always retained, and was always followed by sleep (generally sound). The patients awoke much refreshed in the morning, with an appetite, and able (except on one occasion) to eat and retain something light.—*The Therapeutic Gazette*.

CLINICAL EXPERIENCE WITH SENNA CATHARTIC ACID.

Dr. Karl Dehio (*American Journal of the Medical Sciences*) notes that Cubly has isolated a substance from senna leaves which he believes to be the active principle, and to which he has given the name of cathartic acid. As this substance is irregular and unreliable in its action, it seems fair to conclude that it is not a chemically pure body. Gensz has also isolated an active principle of senna leaves, to which the same name has been given, although it is not identical with that mentioned above. The latter is a brownish-yellow powder, with difficulty soluble in cold, but readily in hot water, and of weakly acid reaction. Further investigation will determine if it be identical with the active principle of rhubarb and frangula. In dose of from one to three grains it produces, after five to seven hours, watery movements, sometimes accompanied by somewhat severe cutting abdominal pains, but usually it is of entirely painless action. The results of its use in twenty-one persons are recorded, generally in single dose and in the form of tablets. In general, in healthy persons, with frequent and copious evacuations, considerable pain was observed, while in cases of simple constipation it found favor because it did not cause any very severe pain. The slower its action the less pain resulted. As the remedy does not have an unpleasant taste, rubbed up with sugar it will be readily taken by children. The dosage can be made more accurately than with other senna preparations. The more obstinate the constipation, the milder appears to be the operation of this remedy, and in these cases this should be the cathartic to be chosen.—*St. Petersburger medicinische Wochenschrift*.

INJECTIONS OF IODOFORM IN GOITRE.

Kapper (*Gaz. des Hôp.*, September 2, 1893) uses a solution containing one part of iodoform and seven parts each of ether and olive oil, which is injected into the goitre after previous disinfection of the skin. The trocar of the syringe is disinfected, and is then plunged to the depth of two or three centimetres into the tumor, and the patient is told to swallow in order to ascertain whether the cannula takes part in the movements of deglutition, or whether it has not been inserted deep enough. Immediately the solution is injected the trocar is rapidly withdrawn, and the orifice of the puncture closed by means of a piece of diachylon plaster. When the goitre is very large, he injects as much as six grammes of the solution at one sitting, in four different parts. The injections were repeated at intervals of four to six days, sometimes on several consecutive days. Local reaction was always feeble. Eight men and six women have undergone the treatment. After ten injections in the course of two months the circumference of the neck was diminished by six centimetres at least, and after

another interval of two months there was a diminution of eight or ten centimetres. Besides this, the discomforts felt by the patients were sensibly attenuated. Six months after cessation of the treatment, the improvement was maintained.—*University Medical Magazine*.

DANGERS OF SUBCUTANEOUS INJECTIONS OF PILOCARPIN.

Rémy (*Rec. d'Ophtal.*, October, 1893) relates a case of white atrophy of the optic nerves in which pilocarpin had been ordered for subcutaneous injection. The effect of the injection was most alarming to the patient, but treatment was continued, and the number of injections were increased. Finally, shortly after one injection, the patient fell back dead. In another case pilocarpin was given subcutaneously to hasten recovery from a cerebral embolism; after its use the patient was seized with a series of epileptic attacks, which passed off when the drug was discontinued. The author relates other cases which have come to his knowledge of dangerous symptoms following subcutaneous use of pilocarpin.—*British Medical Journal*.

ATROPINE IN MORPHINE POISONING.

Cruse (*Archiv. für Kinderheilk.*, xvii., 1-2, 1893) describes the case of an infant a week old who was accidentally poisoned by a grain of morphine administered as a lotion. The comatose condition which resulted was left untreated at first, and then for several hours remained unaffected by various treatments. Eventually, the author administered atropine solution, giving one-quarter of a grain on two successive occasions at an interval of half an hour. Recovery immediately ensued, and was complete in thirty-six hours, other suitable treatment being also employed. The author calls attention to the relatively large doses which were administered without causing unpleasant symptoms.—*British Medical Journal*.

NEW METHOD OF TREATING PULMONARY TUBERCULOSIS.

Dr. Carasso Giovanni Michele, director of the military hospital in Genoa, supported by the well-known bactericidal quality of ol. menth. pip., and the successful experiments of Leonard Braddon with this oil, has, since 1888, treated pulmonary tuberculosis by continuous inhalations of ol. menth. pip. He combines inhalations with internal administration of an alcoholic solution of creosote, glycerine, and chloroform, to which ol. menth. pip. 1-100 is added. The success has been brilliant. Thirty-nine cases are reported cured, and among them were cases in an advanced stage, with cavities, and large numbers of bacilli in sputum. These were all cases in which the disease was confined to the lungs.—*Centralblatt für Therapie*.

THE BACTERICIDAL QUALITY OF NASAL MUCOUS. (DRS. WURTZ
AND LERMOYEZ.)

Nasal breathing is, in three respects, a protection against injury from the inhaled air: (1) By warming the air; (2) by increasing the moisture; (3) by the arrest of dust particles. The very interesting and instructive work by the above authors treats of the latter point. After a part of the dust has been arrested by the so-called vibrissæ at the entrance to the nose, the inhaled air must pass through the labyrinth-formed air passage of the nasal cavity, with its many inlets and irregularities, as through a filter, and arrives in the pharynx almost completely clean and free from injurious qualities. But if the labyrinth fails to perform its function, inflammations occur in the pharynx and larynx, such as ozena. The surface of the nasal mucous membrane is covered by a thin layer of mucus, whose function it is to protect the air passage mechanically against the invasion of microbes by the arrest of dust particles. But if this were the only function of the nasal mucus, the nasal cavity, on account of its favorable conditions for collection, and its warmth and moisture, would become a most favorable breeding-ground for microbes. The nasal mucus must, therefore, possess special sterilizing and bactericidal qualities. Wurtz and Lermoyez have made a series of simple and instructive experiments which prove that it does possess these qualities. And they reason by analogy that not only the nasal mucus, but also other secretions chemically and biologically similar, such as those of the trachea, bronchi, urethra, and cervix uteri, have the same qualities.—*Centralblatt für Therapie*.

ARSENIC IN PULMONARY PHTHISIS.

Dr. Karl Hochhalt holds that the most essential factor in the treatment of pulmonary phthisis is to control the fever. He condemns the administration of the modern antipyretics, because they lessen the energy of the heart, and influence the fever only symptomatically, and the fever returns to its previous height as soon as they are discontinued. In order to control the fever effectually and rationally, he recommends the frequently proposed, and again rejected, use of arsenic, and gives the result of experiments in fifty cases to show that the appetite improved, the body weight increased, and the hectic decidedly improved under its use. He does not think that it has any influence on the process itself in the lung, except in acute initial apex catarrh. He gives Fowler's solution, beginning with one or two drops daily, and increasing by one drop daily until five or six are reached, and then every second day, until he gets to ten drops.—*Centralblatt für Therapie*.

OBSTETRICS

IN CHARGE OF

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PUERPERAL INSANITY A TOXEMIA.

Dr. Menzies, of the Rainhill Asylum at Liverpool (*American Journal of Insanity*), presents a very interesting study of a hundred and forty cases of puerperal insanity. Of these, thirty cases were insanity of pregnancy, sixty-four insanity of parturition, and forty-six insanity of lactation. The author rightly says that these various periods merge so imperceptibly into one another that any division must be, to a certain extent, arbitrary. He applies the term insanity of pregnancy to cases in which mental alienation was noted before the birth of the last child, and all that began two months after parturition he classifies as insanity of lactation.

While it is generally considered that puerperal insanity is apt to have a sudden onset, fifty-four per cent. of his cases presented prodromal symptoms. In all forms depression is the first manifestation, as a rule, in the form of sadness, distrust, apprehension, or religious awe. This period of depression may be of short duration, or persist for months. States of depression are found in fifty-three per cent. of all pregnancy cases, in thirty-four per cent. of parturitional cases, and in seventy-four per cent. of lactational cases.

Pregnancy types. In nearly half the cases the patient imagines she is going to be killed, or has committed the unpardonable sin, or else she combines the two ideas. In this type the delusion as to the disloyalty on the part of the husband exists in but a small percentage. There are no distinctive mental features in this form by which we may distinguish it from other cases of melancholia. A physical examination is necessary. *Mania* of pregnancy, however, has distinct peculiarities, but it is rare, and only eight of the author's cases presented this form. The chief diagnostic points of the insanity of pregnancy are: (1) Silent reserve and unsociability; (2) strongly marked delusions of identity; (3) religious or erotic impulse; (4) rational performance of routine duties if the patient is left to her own resources.

Symptoms rarely present themselves before the fourth month of pregnancy, and most commonly develop in the fourth or fifth month.

Puerperal and parturitional types. Delirious excitement is most usual, occurring in forty-six per cent. of the cases. Suicidal and homicidal tendencies are not uncommon. Among the delusions of puerperal delirium, the most frequent is that of fear of impending death; but false identity, religious ideas, and hallucinations of sight and hearing are common. Acute delirious mania was present in but two of the author's cases. The tendency to relapse after apparent improvement or convalescence is great, and relapse is often quite sudden. Eighteen per cent. of the cases developed in the first week after confinement, fifteen per cent. in the second week, forty per cent. in the first month, and fourteen per cent. in the second month.

Lactational types. The same symptoms occur here as in the other forms, but the order of frequency of the types is different. Thus twenty-four per cent. show melancholic delirium; fifty per cent. quiet, depressed states; twelve per cent. mania; and fourteen per cent. maniacal delirium.

Any given case of puerperal insanity, of whatever type, may pass through six stages: (1) Prodromal disturbance; (2) early delirium; (3) melancholia; (4) stupor; (5) mania; (6) dementia. Many patients pass through all the first five, and yet recover; but, generally speaking, the fewer the stages, the better the prognosis.

As regards the recovery rate, it is high in insanity of the puerperal period, as is generally conceded. Seventy-five per cent. of the author's patients whose cases were of the parturitional type recovered, but only 43.3 per cent. of the pregnancy type, and 56.5 per cent. of the lactational type. In the cases of recovery the duration of treatment until recovery was as follows: Eighteen recovered in two months, twenty-one in four months, sixteen in six months, seventeen in a year, and twelve in over a year.

Twenty-one patients died. Of these, ten had general paresis, five insanity of the parturitional type, and six insanity of the lactational type. Of the last eleven, six had phthisis, one general pyemia, one *Schluckungspneumonie*, one coma and convulsions, one exhaustion and diarrhea, and one acute delirious mania.

Some valuable facts are brought out by the author in regard to certain questions often referred to in connection with insanity connected with child-bearing.

Thus, in seventeen of the one hundred and forty cases the mother evinced a feeling of hostility to her child, but in only two was there an attempt to kill it; fourteen patients attempted suicide before their admission to the asylum, and thirty-one patients showed erotic tendencies.

Erotism plays an important part in the early puerperal period. It generally develops after confinement, but sometimes before it. Indecent overtures and attempts at exposure are made, and in the delirious conditions filthy jokes and grossly vulgar details of private life are given.

As to the influence of the unmarried state upon the production of puerperal insanity, only ten of his patients were single women, and, of these, seven had led dissolute lives previously. The author is opposed to the idea that the shame of exposure and the worry incident to illegitimate pregnancy are causes of puerperal insanity.

Ten cases in the series of a hundred and forty were cases of general paresis, and the author is doubtful as to whether the connection between pregnancy and general paresis should be considered purely accidental.

Another interesting fact is the course of labor in insanity. It is generally precipitate. The rapidity of delivery is very remarkable.

Probably the most valuable part of this paper is the discussion of the pathology of puerperal mania. Dr. Menzies advocates the very sensible theory that the cause is self-intoxication. The maternal excretion is overtaxed by the considerable excretion of waste products from the fetus, accounting possibly for the toxemia in the insanity of pregnancy. Delivery leaves the lymphatics choked with albuminous fluids of low vitality, which, if not excreted quickly, may change and poison the blood, in this way giving rise to the insanity of parturition. The drain of albumin in lactation possibly alters the chemical composition of the blood, and may thus give rise to the lactational type of insanity. These blood poisons engender the psychic symptoms naturally by their effects upon the intellectual substrata. In puerperal insanity a temperature of 101° F. is not at all uncommon, even in the lactational form. Cessation of the lochia invariably aggravates the mental condition, and involution is always retarded. There are waxy pallor, sallow skin, quick production of anemia and wasting, and great destruction of hemoglobin, all pointing to a blood condition, and not to a cerebro-cortical disturbance. The universal benefit derived from a purge, the recognized objection to drugs like opium, which paralyzes osmosis, and the advantages of uterine douches, show that asylum physicians act up to the toxemic theory, whether they admit it or not.

As regards treatment, the author believes in hydrotherapy, purging, good feeding, stimulants, rarely a hypnotic (either chloral or paraldehyde), rest in bed, hot uterine douches, and stopping the secretion of milk, according to the case and its condition. Intestinal antiseptics he believes to be of little or no use.—*New York Medical Journal*.

DANGERS TO THE INFANT FROM FORCEPS DELIVERY.

The modern obstetric forceps is an admirable instrument, but it is well to keep in view the important fact that its use brings certain dangers to both mother and child.

Dr. Swayne, of Bristol, published a short paper in the *Bristol Medico-Chirurgical Journal* on the subject of compression of the umbilical cord during forceps delivery. He considers that this is a somewhat frequent cause of death of the infant, although the majority of text-books say little or nothing about it.

He says the result of his own statistics is that, in a total of two hundred and twenty-four forceps cases, six infants have died from cord pressure; that is, one in $37\frac{1}{2}$ cases. This is only one of the several dangers to which the infant is exposed through the use of the forceps. In consideration of these facts, and having also in view certain dangers to the mother, it might be pertinent to ask if forceps delivery is not becoming too frequent in the hands of some obstetricians.

Opinions, of course, differ, and we think that there are plenty of physicians who go to extremes in either one or the other direction. The writer has in his mind one physician, with an average country practice, who had only applied the forceps once in twenty years; and, at the same time, another able country physician, with a large practice, who said that he applied the forceps in something like two out of three cases.

Which of these two is likely to have had the larger fatal mortality as the result of his methods? Probably the former, but that is by no means certain. We think that, in this country, the tendency during recent years has been in the direction of a more frequent and early use of the forceps. Perhaps this is right, but it is well for all to learn the lesson which Dr. Swayne endeavors to teach: that is, that the frequent and early use of the midwifery forceps is associated with grave dangers both to mother and child.

 ERGOT AND QUININE IN LABOR.

Cordes, in a memoir upon the use of quinine, gives the following conclusions:

(1) Ergot, an excellent remedy in arresting uterine and other hemorrhages, should be replaced by quinine when the uterus contains a solid body, without excluding other treatment.

(2) In tardy labor quinine is preferable to ergot, which may asphyxiate the child, either by the tetanic contractions which it causes, or its elective actions upon the cervix. In medicinal non-toxic doses, it need not be feared for pregnant women suffering from intermittent fever; but, on the contrary, is useful in such cases.—*Annual of the Universal Medical Sciences.*

UNCONTROLLABLE VOMITING IN PREGNANCY.

Blanc (*Archives de Tocologie et de Gynécologie*) refers to the unfortunate position in which the practitioner is placed when in charge of a patient with uncontrollable vomiting during pregnancy. If performed too early, induced labor involves the destruction of a fetus which might have lived. If too late, after great emaciation, syncope, and delirium have set in, the patient's death may be deferred for a very short time, or even hastened. The uterus cannot be made to contract in these advanced cases. Hence it must be emptied of its contents. Blanc attended a lady in her third pregnancy. The first had been normal, the second ended by spontaneous abortion at the fourth month, after uncontrollable vomiting. On this occasion the patient had reached the third month of pregnancy. The vomiting was very severe, there was fever, and the least movement produced faintness. Cerium, cocaine, ice, champagne, and chloroform-water had all proved of no service. A laminaria tent was introduced; it set up contractions which soon passed away. Next day another tent was passed into the uterus. A day later a long strip of iodoform gauze was passed into the uterine cavity. At the end of twenty-four hours no contractions had occurred, and the patient was delirious. She was placed under ether; then the uterine cavity was scraped thoroughly, and the fetus, placenta, and membranes removed by means of the curette. A plug of iodoform gauze was packed into the uterus after irrigation with bichloride of mercury solution. Subcutaneous injections of caffein and ether were then given. By the next morning the delirium had passed away, and the patient could take a few cups of cold milk and soup, and a little champagne. At the end of two weeks she was restored to health.—*Univ. Med. Mag.*

LYSOL IN MIDWIFERY.

Lysol is highly recommended by certain Germans as an antiseptic in midwifery. It consists of a mixture (in about equal proportions) of creasol and soft soap, and is readily soluble in water at any temperature. On account of its safety and cheapness, it is especially suited for midwives and nurses. Peè recommends a 1 per cent. solution for disinfecting the hands, instruments, or the field of operation.—*The Year Book of Treatment*, 1893.

SECOND LIGATURE OF CORD.

Trèpant (*Gaz. des Hôp. de Toulouse; Brit. Med. Jour.*) objects to ligation of the cord on the placental site. He believes that it favors retention of the placenta. In sixty-eight cases of double ligation he observed four retentions; in one hundred and forty-six where one ligation was applied, the cord being divided on the placental side, only two retentions followed.

SURGERY

IN CHARGE OF

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EMPHYEMA.

I have already said that the ordinary signs of pleuritic effusion may fail sometimes, and this is perhaps more noticeable in young subjects than in those of adult age; but this feature, or rather absence of it, is common enough at all ages. . . . Experience teaches that the mere existence of one or two pints of fluid in the chest is of itself a fact of no great importance unless it be accompanied by definite symptoms of urgency. And the existence of fluid is often unaccompanied by any such symptoms; and when this is the case, it is very difficult to be certain of its presence.

Now, I do not say this to encourage carelessness, but because I want you to think the matter over physiologically, and because I believe we are in the habit of looking at the mechanism of respiration from a much too narrowly mechanical standpoint. How is it that fluid can be present in the chest, even in considerable quantity, and give, as I say it may do, very little evidence of its presence? We are in the habit of looking at the pleural sac within its costal walls too much as a barrel in which fluid, if present, sinks to the bottom. This is true within certain limits, but you must always remember that in the so-called barrel there is a boat, viz., the lung, that is capable of pumping up and down more or less, and in so doing is capable of exercising a good deal of displacement. Therefore the gravitation of the fluid depends upon other circumstances than the hydrostatic one of water finding its own level, and indeed it depends more upon the question, which has got the upper hand, the water or the respiratory vigor of the patient? If the latter be good and the lung tissue healthy, the displacement of the fluid will be the greater, and it will be driven into all sorts of corners and over the surface of the lung, and I am

sure that if you study the matter you will be astonished at the facilities there are in the chest for the stowage of fluid away out of our ken. One, two, three, four pints of fluid may be inside, and yet no symptoms to speak of. . . . What one does find is that the chest is distorted, and generally altered in shape. I do not deny the diminution in size in many cases, but it is inconspicuous in comparison with the notable alteration of *shape* to the naked eye. I take this to mean that where the chest has gone *in* at one part it has bulged out at another, and that the spine rotates a little, and the mediastinum yields, and by this general give and take the actual alteration at any one part is reduced to a minimum. And let me dwell upon this point a little more with reference to the treatment of empyemata, because here, again, I think the simile of the barrel comes in to falsify our physiological deduction and to impede the treatment of these cases. It is said that the chest being a cavity with rigid walls, the opening into it, if we are to secure proper drainage, must be made low down. But the analogy is a false one. The chest walls are rigid to some extent, but it would be better to think that an empyema was only an abscess, and nothing more, than to hold too rigidly to the unyielding nature of its walls, and to be guided in one's means of dealing with it by the necessities that such an idea seems to enforce. Now, when you open an empyema, in the majority of cases you do not create a general pneumothorax. The chest wall is more or less paralyzed by the incision into the pleura; the parts fall in in all directions, not the wall only, but the mediastinum and the diaphragm, and as a consequence the pleural surfaces in great part cohere. Thus it may happen that the cavity may be at once completely obliterated, as I have seen happen before now.

And as a natural inference from this tendency, as in all abscesses, for the walls to fall in and to come into contact, it may be concluded, as is certainly the teaching of experience, that it matters very little where the opening is made; it may be located wherever pus seems to be in large quantity, or indeed for other reasons that may seem to be of convenience to the patient or the surgeon.

And this may lead me on to a point that concerns itself with the same questions: there is sometimes a good deal of fluid in the chest, and yet it cannot be removed by the aspirator; and with respect to empyemata we cannot always obtain this natural evacuation of the cavity; and when this is the case, you may generally infer that this falling in of the parts and obliteration of the cavity are hindered for some reason or other, and these are the cases where, if the pus be evacuated, there *is* more or less of a general pneumothorax, and these are the difficult and serious cases to deal with. To name only one or two of the conditions of the lung that are likely to lead to this, there are growths in the pleura in the case of simple

effusion, and chronic indurative conditions of the lung from any cause ; chronic pleural thickenings binding the lung down for either serum or pus.

It is a good rule, which I never depart from, always to put in an exploring needle before operation ; for although you may know that there is pus in the chest, it is a satisfaction to know that at the very spot where the surgeon is going to make his incision there is pus present at the time.

We seldom now waste time by aspirating as a preliminary measure which may cure without resort to severer measures. It *may* do so, but the success attending the attempt is so little that it is not worth while in the usual run of cases to resort to this proceeding. I occasionally aspirate as a temporary measure to gain time.

Of the general treatment of empyemata I must not say much, and yet there are one or two points upon which I should like to express an opinion, because I have had ample experience to warrant it. And in the first place, as regards excision of the rib, I hold now, as I did some years ago, that it is quite unnecessary for the majority of cases. It is very generally practised, and it adds little to the risk of the operation. But I take my stand upon this principle—that what is unnecessary is meddlesome, and meddlesomeness is bad. Surgery, in the height of its present power, can afford to allow that it occasionally gives way to an excess of zeal. Another thing seems to me to be overdone, and that is the use of drainage tubes. They seem to me to be getting bigger and bigger. I have seen of late the most astonishing things in size. And in the advantages that have accrued to the success of surgery from free drainage our sense of proportion in this direction seems to have suffered. I venture to think, if only from the point of view of the comfort of the patient, and this *is really* of *some* moment, that drainage tubes may be too big. And I further believe that any advance in the treatment of empyemata will come from simpler measures even than those now in vogue, and that by and by we shall see them dealt with as simple abscesses ; that is to say, by simple incision, and perhaps coupled with an initial washing out of the pleural cavity. I believe I am right in saying that Dr. Bowditch has practised this plan extensively, and of late I am told that Sir Joseph Lister has even adopted the plan of opening the abscess in the pleura, has washed it out and closed it up again as he would do abscesses in some other regions ; and I believe, from the observation of the various kinds of pus that are found in the pleura, that in some cases of acute disease this might be done with a fair hope of success, and so accelerate the patient's recovery by several weeks. There is no doubt that their recovery is retarded by keeping a drainage tube in too long.

Next, a word about washing out the pleura. In former years I have been strongly opposed to washing out the chest except under very special

circumstances, such as the obvious retention of septic material in the pleura. But of late I have come to think that an initial irrigation of the chest—that is, at the time of the operation—may be of advantage in assisting to clear away the corpuscular matters and the clots of lymph that are so frequently found. And indeed I would add that in the presence so often of these masses of lymph I do see a valid argument for the excision of a piece of rib, if it be found that the lymph is more readily got away by such means, as I must admit seems likely to be the case. But I object as strongly as I have ever done to the practice of irrigation *afterwards*, unless for special circumstances. . . . As I have already endeavored to impress upon you, the cavity of an empyema after it has been opened is as large or as small as you like to make it. Natural processes tend to contract it at once to the smallest possible dimensions. Irrigation tends to interfere with this process of shrinking; to disturb the natural cohesion that I have talked about, and so to retard recovery. There is, as you well know, some slight risk attaching to irrigation, but I say nothing about that, as it is at best but slight.

Fetidity of the contents of an empyema is a by no means uncommon symptom, and it used to raise in my mind a suspicion of some gangrenous patch in the lung or extension of disease from surrounding organs, particularly from the liver. But of late I have come to think that it cannot be by any means always so, for in my experience these cases generally do well. . . . The treatment of such cases is not different from that of simple empyema, save that the initial washing out is certainly advisable. But on this head I wish to say that in my experience the *natural history* of such cases is that the fetidity ceases after a few days, and that they are not therefore cases that require any great length of treatment of this kind.

Next, there comes a question about empyemata that open through the lung. What I have seen of later years leads me to believe that, on the whole, it is better in such cases to explore the pleura from the outside, and, if pus can be found, that the pleura should be opened as in a simple case. If the pus be allowed free drainage without tinkering, the sinus in the lung mostly readily heals, and the patient recovers well.

Double empyemata are occasionally met with, I think not so very uncommonly, if we are on the outlook for them. How should they be dealt with? In the few cases I have had my practice has been what seems to be the common-sense one—of opening that on the one side first, and then after a week or ten days—there is no hurry in these matters—dealing with the other. But I remember that one case has been recorded in which both pleuræ were opened at the same operation and the patient did perfectly well.—James F. Goodhart, in *International Clinics*.

CHLOROFORM NARCOSIS.

Resuscitation in chloroform narcosis has been accomplished by a new method devised by Maas, one of Konig's assistants at Gottingen. In the first case, the ordinary means of resuscitation had been tried for an hour without effect; respiration and pulse had entirely ceased. Maas then made rapid rhythmical compressions, about one hundred and twenty per minute, of the cardiac region, whereupon the heart's action gradually increased and the patient recovered. A second severe case responded with the same result to treatment. Maas ascribes the effect of the cardiac compressions to the driving of the blood into the larger arteries.—*Nashville Journal of Medicine and Surgery*.

VINEGAR AS A REMEDY AGAINST VOMITING AFTER CHLOROFORM.

Immediately after having performed the operation and placed the patient in bed, he (Warholm, in *Satellite*) applies a handkerchief moistened with vinegar in front of the nose, letting it remain there until the patient returns to consciousness, or longer if it agrees well with him. Of thirty cases experimented upon by the author, the majority were benefited. In most of them the effect was absolute. In two cases the remedy did not succeed; one of these was an alcoholic. The patient should have a small phial, filled with vinegar, standing at his bedside, to smell as the demand arises.—*Southern Clinic*.

THE USE OF HYDROGEN PEROXIDE IN THE PERITONEAL CAVITY.

Dr. F. H. Wiggins (New York), in a communication to the *Medical Record*, urges the free use of hydrogen peroxide for the purpose of disinfecting the abdominal cavity when it has been infected during an operation. He says:

"Recently I have had occasion in two cases to use it, and instead of a weak solution have used it of full medicinal strength.

"In the first case, September 6th, in the course of the removal of a purulent ovarian cyst, parts of the contents escaped into the general cavity. Half a pound of hydrogen dioxide of full medicinal strength was poured into the cavity, and the patient made a prompt and uneventful recovery.

"In the second case, September 13th, a boy of sixteen, resection of the small intestine (Maunsell's method), an escape of fecal matter into the peritoneal cavity was followed by the use of a liberal quantity of dioxide; and although general peritonitis and fibrinous exudation in the intestine was present at the time, the peritonitis subsided, the temperature never rose as high after the operation as previous to it, and the boy, up to date, has made a good recovery."

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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TREATMENT OF ACUTE ORCHITIS BY CARBOLIC SPRAY.

(MM. Thiéry and Fosse, *Gazette des Hôpitaux*.) This is an extract from the *Gazette Médicale de Paris*. The patient is placed on the edge of the bed with his feet resting on two chairs; the hypogastrium and the upper part of the thighs are covered with mackintosh tissue, so as only to expose the scrotum. The scrotum may either be covered with a layer of gauze or left naked. The vaporizer is placed on a chair or table at a distance of 25 to 30 cm. from the patient, so that the steam is projected against the scrotum as hot as possible. Each sitting lasts from twenty to thirty minutes, and is renewed twice a day until the pain has disappeared. In the intervals the patient lies in bed with the scrotum raised on a hollowed board. A solution of 1 in 30 is used, and no other internal or external treatment is pursued.—*Quarterly Medical Journal*.

[We clip the above simply to show of how very little practical value many medical articles possess. We are told nothing of the advantages of the treatment; we do not know whether it cuts short the attack or causes the pain to subside more quickly than other treatment. It is simply a new application of a hot fomentation—which is fairly good treatment, although dry heat is much better.—E.E.K.]

SUPRAPUBIC CYSTOTOMY IN URINARY AFFECTIONS OF PROSTATIC ORIGIN.

M. A. Poncet (*Gazette des Hôpitaux*) describes this operation, which he proposed several years ago in certain prostatic patients, and says that to-day the indications seem to have multiplied, and to have become much clearer. He describes two cases. Suprapubic puncture of the bladder and methodic opening of the bladder are in some cases the only two resources, and the former ought to be regarded simply as a makeshift, and not to be repeated, because when the urine is foul and ammoniacal it may

lead, as in several instances within his own knowledge, to prevesical cellulitis. Suprapubic cystotomy, on the contrary, is an operation which is almost innocuous, since in nearly sixty cystotomies for prostatic trouble he has never observed the only two complications which can be imputed to it, viz., wound of the peritoneum at the time of the operation, and urinary infiltration. When death has occurred it could not be attributed to the operation, because he has constantly found pyelo-nephritis of shorter or longer standing. Cystotomy is indicated when catheterism is badly supported, when false passages exist, when the prostatic obstacle is difficult to overcome. In some cases after cystotomy, micturition by the urethra re-establishes itself completely, owing to repose of the bladder and prostate, the latter having undergone some degree of atrophy. In other cases this is not the case, and the patients have to wear some kind of apparatus, and the suprapubic sinus has to be kept open by repeated catheterism. The incision is made in the middle line, and the bladder is incised as close as possible to its neck; the vesical incision is then stitched to that in the abdominal wall by six metallic sutures, and the bladder is washed out with hot boracic acid water. He concludes by saying that the operation secures to those with enlarged prostate a calmness, a functional security, which they often have not known for a long time; it puts an end to painful phenomena; it causes all fear of retention to disappear; and, finally, it appears to him to be the only means in many cases of effectively struggling against urinary infection.—*Quarterly Medical Journal*.

URETERO-CYSTONEOSTOMY.

M. Bazy (*Gazette des Hôpitaux*) describes an operation for making the ureter open into the bladder in cases of uretero-vaginal fistula, with obliteration of the ureter. Uretero-vaginal fistula following nipping of the ureter and its obliteration have been treated so far by nephrectomy. M. Chaput has, however, succeeded in fixing the ureter into the colon. M. Bazy's patient was a woman on whom vaginal hysterectomy had been performed three months previously for fibroma; after the operation the urine passed *per vaginam*, owing to the presence of a uretero-vaginal fistula. As regards the details of the operation, he simply opened the abdomen, sought for the inferior extremity of the ureter, which he found distended and separated from the bladder by half to three-quarters of an inch of cicatricial tissue; he then punctured the ureter and resected it. He incised the bladder near to the end of the ureter, and united the lips of the ureteral incision to those of the bladder incision by silk sutures. He then sutured the peritoneum over it, and closed the abdomen, after having put in an aseptic gauze drain. From the time of the operation the

patient did not lose a drop of urine by the vagina. In both the ureter and bladder he placed a red rubber catheter *à demeure*, which was left in for five days. Cystoscopic examination a month later showed the ureteral orifice in the form of a slit directed obliquely from above downwards and outwards, a centimetre in length and spindle shaped, *i.e.*, more open in the centre. The kidney, which was previously enlarged, *i.e.*, hydronephrotic, had attained its normal size. The operation is suitable in those cases where neither the ureter, the pelvis, nor the kidneys are infected.—*Quarterly Medical Journal*.

ON ABSORPTION BY THE URINARY TRACT.

If classic treatises on physiology be consulted, it will be found that they contend that the urinary bladder is lined by a mucous membrane that has no power of absorption.

It is classic to say that the healthy urinary bladder does not absorb, and experiments are cited in support of this contention; and, again, it is classic to say that only when the bladder epithelium is stripped off has the bladder any absorbing power.

Having observed certain clinical facts for a long time, I was led to the supposition that the bladder has absorptive power. Experiments conducted over several months have convinced me that the healthy bladder has the power of absorption.

An animal can as certainly be killed by injecting a poison into its healthy bladder as it could be by injecting the poison under its skin, or into its rectum.

The three principal reasons for this popular error are: (1) Imbibition has been confounded with absorption; (2) sufficiently active poisons have not been used, so that the results would be beyond dispute; (3) poisons that were not toxic to the animals experimented upon have been used.

In my experiments I used a No. 8 F. gum elastic catheter. I never distended the bladder, so as to avoid the intervention of pressure, also to avoid the provoking of a necessity to micturate, and thus cause the urine to pass into the urethra. I did not in any case ligate the urethra to prevent absorption by the urethral mucosa.

Chemical and microbial poisons were used. In the case of the latter, I sometimes injected the microbi-toxine pure; sometimes pure cultures of the microbes were used.

The chemical poisons, provided they were strong, always gave immediate results. In those cases where the effects were not immediate, the animal died, after a more or less protracted time, anyhow.

Cocaine, strychnine, hydrocyanic acid (medicinal), killed the animals

in a few minutes ; cocaine applied to a large, denuded, cutaneous surface has no action ; belladonna, curare, pilocarpine, produce their effects much more slowly, and seem to act by slowly producing minute nutritional cellular changes.

The absorption of chemical poisons by the bladder seems to throw a certain amount of light on urinary pathology, and gives an explanation for the great difference existing between the effects of vesical and renal retentions (these last do not affect the general state to such an extent), and, again, they allow of the very much longer survival of the patient.

The vesical injection of microbi-toxines produces effects no less striking. Taking a microbe, to the effects of which the rabbit is most susceptible, the pneumococcus, I was able to get five deaths out of six rabbits injected ; these within the space of three to five days, with pleural and peritoneal exudations, without renal lesions—a most important fact for the history of urinary infections.

An emulsion of gangrenous muscle by the pus-microbe was injected on two different occasions into the bladder, after first filtering in Chamberland's filter, and killed the rabbits in twenty days.

Of the four rabbits injected with Chanin's pyrogenic substance, two died ; one at the end of seven days, the other after fourteen days.

The consequence of these facts, as related to human pathology, are easily seen, and the light that they throw on the pathogenesis of urinary infection is apparent at sight.

He also studied absorption with reference to the ureter and urethra.

Urethral absorption is very active, but ureteral much less so. When toxic substances reach the calices, he found that the effect was well-nigh instantaneous with the solutions he used.—M. P. Bazy, in *Gazette des Hôpitaux*.

J.A.A.

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

W. B. THISTLE, M.D., L.R.C.P. Lond.,

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AND

B. E. McKENZIE, B.A., M.D.,

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MEMBRANOUS INFLAMMATION OF THE THROAT IN SCARLATINA.

In the report of the January meeting of the London Medical Society there appears an interesting report and discussion on this subject. Dr. J. W. Washbourn read for himself and Dr. E. W. Goodall a description of a fatal case of membranous inflammation of the throat accompanied by a rash. The diagnosis rested between (1) severe scarlatina anginosa with membrane; (2) diphtheria with rash; (3) co-existing scarlet fever and diphtheria. Subsequent desquamation and an absence of diphtheria bacilli on a careful bacteriological examination proved that the case was one of scarlet fever with membrane. The difficulty of diagnosis was due to the remarkable toughness and thickness of the membrane. Such a condition was uncommon, although it was well known that a membranous inflammation of the throat indistinguishable from diphtheria was quite common during the acute stage of scarlet fever. This condition had been found not to be true diphtheria by various bacteriological investigators. The authors examined four cases of this nature, and failed to find diphtheria bacilli. Clinically, too, it was not diphtheria, for out of 123 cases seen by the authors only 2 developed croup and 2 subsequent paralysis. On the other hand, a membranous inflammation of the throat occurring during convalescence from scarlet fever was generally true diphtheria. In 4 cases examined by the authors they readily found diphtheria bacilli by cultivations, and they had notes of 11 cases in which the membrane spread to the larynx, of 3 cases which were followed by paralysis, and of 1 case in which the vulva became affected with diphtheria inflammation. In 8 consecutive uncomplicated cases of diphtheria, the bacilli were readily demonstrated. The conclusions drawn were that a membranous inflammation of the throat occurring during the acute stage of scarlet fever was

generally not true diphtheria, but a similar condition occurring during convalescence was true diphtheria. These conclusions were in accord with the bacteriological examinations made by several investigators abroad, and by Klein in this country.

Dr. Sidney Martin said that he had cultivations from two non-diphtheritic membranous cases; one gave only a large diplococcus, and the case readily yielded to local treatment with nitrate of silver. He regarded diphtheria as an acute infective disease, cultivation from the membrane of which gave a bacillus producing a poison the inoculation of which in animals produced paralysis. In a second severer case, that of a girl, aged 15, who had a red throat, with fever and enlarged spleen, and who died, there were found *post mortem* two patches of membrane, one on the rim of the epiglottis and the other on one of the tonsils, whilst micrococci had spread through the tonsil and epiglottis, contrary to true diphtheria bacillus, which never spread below the surface. He thought the membranous throats of scarlet fever were caused by micrococci and other organisms not diphtheritic.

PYOKTANIN IN DIPHTHERIA.

C. Horing (*Memorabilien*, October 19th, 1893) refers to the treatment he adopted early last year in 27 cases of diphtheria, the results of which were published in the *Aerztl. Memorabilien*, vi. and ix., 1892. Since then Horing has continued to use pyoktanin, and claims excellent results. The practice was to apply a 3 per cent. solution two or three times daily to the pharynx and downwards to the epiglottis, the retention of the liquid in young children being secured by immediately placing their heads low, thus aiding the swallowing of the liquid. Otherwise the drug was not administered internally, nor was it directly introduced into the affected tonsil. Simultaneously, the patients are syringed with lime water, or are allowed to use it as a gargle or inhalation, while salicylate of soda is given internally. When the nose is affected, a tampon soaked with the solution is retained in the cavity, and in milder cases the application of pyoktanin to the pharynx, etc., is the only treatment followed. In support of his practice, Horing says he has found even a 1 in 1,000 solution to destroy the Klebs-Loeffler bacillus, as also the more active streptococcus, the latter in the course of half a minute. In practice, the local effects are antiseptic, healing, and destructive to the false membrane, the general results being diminution of pain and pyrexia, without the production of toxic symptoms. The present cases enumerated are 112, two of which succumbed for reasons explained; the remaining 110 cured cases included many serious cases which had been despaired of. The symptoms, spread of contagion,

and sequelæ, are quoted in support of the diagnosis. The author, in view of his experience, supported by that of others, regards pyoktanin as a specific against diphtheria.

CORRECTION.

In the abstract from Prof. Hosley's lecture on the treatment of cerebral tumors, which appeared in the section on Pediatrics in the December number of *THE PRACTITIONER*, two misprints occur. The final clause in the quotation from Louis Starr, "the operation is not to be performed," should have read "the operation is not to be *postponed*." Next line, "cure from mercurial treatment," should have been "cure from medicinal treatment."

TREATMENT OF GONORRHEAL OPHTHALMIA.

Burchardt (*Centralbl. f. Prakt. Augenheilk.*, November, 1893) describes the treatment he has found most successful in acute purulent ophthalmia of gonorrheal origin in children and adults. He formerly carried out the classical treatment of leeching, scarification of the conjunctiva, cauterization with nitrate of silver, and ice compresses. He has gradually omitted all these methods in consequence of some ill-effect they had, or because they appeared to him irrational, and he now confines himself to a very free irrigation of the conjunctival sac with a five per cent. solution of chlorine water, followed by a one-tenth per cent. solution of nitrate of silver. The head of the patient is thrown back so that he looks directly upwards; an assistant then allows the solutions to fall upon the inner canthus drop by drop, while the surgeon moves the lower lid up and down very freely with the thumbs, and the upper lid more slowly with one of the fingers. By this means he is able to clear the conjunctival sac very completely. The success of the treatment appears to lie in the very free movement imparted to the lids, whereby the fluids gain access to all the folds of the conjunctiva. Shreds or membranes are removed from the conjunctiva after everting the lids.

TREATMENT OF DISEASES OF THE NOSE AND THROAT IN INFANTS AND YOUNG CHILDREN.

In a paper on this subject Dr. Jennings, of Detroit, points out the great importance of local treatment to the throat in the inflammatory conditions occurring in connection with the acute diseases of children. Taking measles as a type of these diseases, there may be, as a secondary manifestation of the throat inflammation, suppurative disease of the middle ear, chronic nasal or pharyngeal catarrh, adenoid vegetations of the

vault of the pharynx, and chronically enlarged or tuberculous glands. These sequelæ can almost certainly be prevented by proper local treatment.

In diphtheria the specific bacillus is found on the surface, and the toxine is absorbed from the membrane. In addition pus cocci develop, and complicate the diphtheria with pus poisoning. During the course of scarlet fever throat inflammation, the streptococci and staphylococci of pus develop in great abundance, and are the cause of many of the most dangerous complications and sequelæ of the disease. The cervical adenitis and abscesses, the purulent otitis media, endocarditis, pleuritis, arthritis, and various other remote inflammations, are of the same nature. All these conditions are more or less preventable by local treatment of the throat and nose.

He advises the purification of the nose and pharynx by frequent use of antiseptic solutions by either the spray or douche.

The solution most frequently used is the antiseptic alkaline solution of Seiler :

Sodii Bicarb.	3i.
Sodii Bibor.	3i.
Sodii Benzoat.	grs. iss.
Sodii Salicyl.	grs. iiss.
Eucalyptol.	grs. $i\frac{1}{4}$.
Thymol.	grs. $i\frac{1}{4}$.
Menthol.	gr. $\frac{1}{4}$.
Ol. Gaultheria.	gr. $\frac{3}{4}$.
Glycerine.	$\bar{3}$ iss.
Alcohol.	$\bar{3}\frac{1}{4}$.
Aquam q.s. Oii.	

Tablets after this formula are put up by the manufacturing chemists. Listerine, 1 to 15, is also an excellent solution. Peroxide of hydrogen alone, diluted to 1 to 10, or in combination with Seiler's solution, is recommended highly by the author.—*Archives of Pediatrics*, January, 1894.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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AND

E. HERBERT ADAMS, M.D., D.D.S.

TUBERCULOSIS IN CATTLE.

Nineteen thousand one hundred and ninety-one cattle were examined by the State Board of Health of New York last year, and 613 were destroyed because they were found to be suffering from tuberculosis. In Ontario cases of tuberculosis in cattle have been found recently at Guelph, Toronto, Hamilton, Ottawa, and other places. In Quebec, at Montreal and elsewhere cases have been discovered. It is high time for the health departments of the Dominion and Provincial Governments to take active measures to prevent the further spread of this disease amongst our cattle.

PUNISHMENT FOR SANITARY DELINQUENCY.

In France drastic measures are imposed on officials who are remiss in attending to their duties. The *Medical Week* of Sept. 29th reports that the mayor of a provincial town was recently suspended from his functions because no sanitary measures had been adopted at the outbreak of an epidemic to prevent the propagation of the disease, which was allowed to spread among the population for more than ten days before an attempt was made by the municipal authorities to comply with the advice of the medical man in charge, and with the instructions of the government, by taking the necessary steps to stay the epidemic's progress; also because of the delay in the adoption of the precautionary measures recommended by the physicians sent by the government.—*The Sanitarian*.

AMERICAN PUBLIC HEALTH ASSOCIATION.

At the annual meeting of the American Public Health Association, held at Chicago, October 9-14, 1893, the following resolution offered by Henry P. Walcott, of Massachusetts, was adopted:

Resolved, that the American Public Health Association again urge

upon Congress the necessity of the appointment of some officer with general sanitary authority in connection with the national government.

That the functions of such an authority are of sufficient importance to demand the exclusive attention of the best instructed sanitarian.

That such authority should be enabled, from time to time and under proper regulations, to secure the advice and co-operation of the state boards of health.

At the meeting of the International Congress of Public Health, held under the auspices of the American Public Health Association of the World's Congress Auxiliary of the World's Columbian Exposition, at Chicago, October 10-14, 1893, the following resolutions were adopted :

(Offered by Dr. J. E. Monjaràs, of Mexico.) Resolved, (1) That the educational authorities of the various nations represented here be requested to devote a longer time than they now do, in their curriculum, to the teaching of hygiene.

(2) That the governments of the countries represented at this congress be urged to appoint to sanitary positions and commissions only such persons as may have acquired a special education in sanitary studies.

(Offered by Dr. Benjamin Lee, of Pennsylvania.) Resolved, That the International Congress of Public Health affirms in the strongest possible manner its confidence in the value of vaccination as a preventive of small-pox.

(Offered by Mr. Henry Lomb, of Rochester, N.Y.) Resolved, (1) That this congress urge upon the people of the countries here represented the importance of completing our sanitary organization by forming voluntary Public Health Associations, to study for themselves the conditions of healthy living in the home and in the community, and, to afford efficient and persistent support to the work of public health officials.

(2) That this congress respectfully ask state and local boards of health to assist in all proper ways the formation of such organizations.

Editorials.

THE COUNCIL AND ITS REAL ESTATE.

THE Defence Association has had a good deal to say about the so-called speculations of the council in real estate. During the earlier days of the war between the association and the council, many of the remarks on this subject were unpleasant, if not offensive, in character. We are glad to notice that recently the criticisms on this subject have been more moderate and reasonable in tone.

It is probably conceded by most physicians at the present time that some sort of a structure is required by the council, not only for its regular meetings, but also for examination purposes; but the leader of the Defence Association says that "an unpretentious structure" in "a less expensive locality" would be quite as suitable as the present building, and at the same time less expensive.

Before deciding on any radical change, the new council will do well to consider the matter in all its aspects. While the present building was being erected, we think that there is no doubt that the council was well officered. It will be remembered by those who took any interest in the matter at the time that Dr. Henry Wright, as chairman of the Building Committee, spent a large portion of his time in looking after details in all directions. He received at the same time material assistance from others who desired to get full value for the council's investment. We feel certain that never in the history of medicine in this country was more honest or faithful work done in the interest of the profession. The men who contemplate the erection of something *cheap* in some *cheap* locality had better mature their plans very thoroughly before they engage in any new building operations. The new building, like the old, would require a large examination hall, and it might be somewhat difficult to make it much more economical than that which is now owned by the council. However, when we get the plans of the proposed cheap building in the cheap locality, we shall be in a better position to discuss the matter intelligently.

INFANT MORTALITY IN ENGLISH MANUFACTURING TOWNS.

A PARLIAMENTARY committee of the British Medical Association has recently been investigating the subject of infant mortality in certain artisan towns where women are largely engaged in factory labor, and has sent a report on the subject to the Home Office. A great deal of information was received from a valuable report by Dr. Reed, the medical health officer for Staffordshire. In giving the average infant mortality for his county during a period of four years, from 1889 to 1892 inclusive, he says that deaths of children under the age of one year in groups of towns where many women are engaged in factory work were 196 per thousand registered births. In groups where fewer women were similarly engaged the deaths were 173 per thousand, and, practically, where no women were so engaged they were 160 per thousand. These rates correspond closely to those of the previous ten years, according to reports forwarded to the Home Office.

It will thus be seen that in certain manufacturing cities where women are largely employed in factories the mortality of infants is increased to the extent of something like 35 per thousand, in consequence of the fact that nursing mothers leave their children at home during the day while engaged at their routine factory work.

We have here a sad picture in many respects. The maternal instinct is the most noble and most steadfast characteristic of womanhood. Words cannot describe what many of these women suffer in leaving their little ones improperly cared for, while they go out to earn bread. When they return to their homes in the evenings they generally have their children to look after, and their housekeeping to attend to. In many cases they soon become broken down and die. Women who would otherwise have large and healthy families become helpless and chronic invalids, and help to fill the various poorhouses of the country. What the state loses by all this it would be hard to compute; and how it is going to provide a remedy only a very wise political economist can tell. Such sad facts show the terrible struggle for existence which is going on in Great Britain. Other countries are in no better condition. The world seems at present to contain too many people. Earthquakes or big wars may, in the near future, furnish drastic remedies. The outlook from any point of view is not particularly pleasant.

RAILWAY OR CORPORATION SURGEONS AND THEIR RELATIONS TO THE GENERAL PROFESSION.

THERE has been a good deal of discussion recently on the rights and duties of surgeons to large corporations, such as accident insurance companies, railways, etc., and their relation to the general profession. The Street Railway Company of Toronto have employed a surgeon to take charge of persons injured by their cars. It has been contended by some that the surgeon, in treating, or offering to treat, such patients, has, in some cases, interfered with rights of other practitioners.

We have received a communication on the subject from Dr. Spence, which, on account of its undue length, and the introduction of personal issues—which, in our opinion, can accomplish no good—we do not publish in full. We extract from it, however, the following resolution, passed by the council of the Toronto Medical Society, after a careful consideration of the question in connection with certain street railway accidents, and the treatment of the parties injured thereby :

“Resolved by this committee that, except in emergencies, it is unprofessional for any medical man to visit the patient of any other medical man without his knowledge and consent having been first obtained.”

As we understand that the principle involved in this resolution has been accepted by all parties concerned in the investigation, we think that further discussion at the present time is needless.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—You may be interested to know that I receive your journal regularly every month, even in this dark quarter of the earth. Accept my thanks for your kindness in sending it to me. Its familiar aspect, and the reading of articles from the pens of old friends, in a measure bridges over the great gulf in space that separates me from my old home and colleagues, and emphasizes the fact that distance alone cannot separate friends. .

And now, as we have gotten fairly well settled in our new home, I thought you might be interested in knowing something of my doings, and of the kind of work into which I have dropped. Let me assure you that in leaving Toronto I did not leave behind me the need to work. Disease is world-wide. We arrived in Japan per "Empress of India," June 19th, 1893, having had a delightful voyage of rather more than thirteen days. I was pleased, on going aboard the ship, to find my old student friend, Dr. H. A. Bruce, occupying the position of ship's surgeon, he having succeeded another former Toronto graduate, Dr. Gordon. I am glad to say that he did not have much opportunity to give practical evidence of his professional skill during his first trip, but he won the esteem and respect of the passengers and crew ; and I have no doubt that, when occasion requires, his natural ability and thorough medical and surgical training will show to advantage, and reflect credit upon his school.

We spent three pleasant weeks in Japan, remaining most of the time in Yokohama, but visiting the great city of Tokio and seeing its beautiful and strange sights. I visited some Japanese hospitals, and found them conducted according to foreign methods, but entirely attended by native physicians. The University of Tokio is a very large institution, supported by government, and giving instruction in all manner of subjects. It has a large and strong medical faculty, and has turned out many competent physicians and surgeons. I was sorry that at the time of my visit the summer vacation was on, so I was unable to gratify the curiosity I felt to see for myself its methods of working. It has been largely in the hands of

foreign professors, but these are being gradually replaced by its own graduates.

We thought at one time of remaining in Japan till September, but gave up the idea and took boat again for Korea. The voyage through the inland seas of Japan was truly delightful, the scenery being picturesque, and the stopping places sufficiently numerous to break up the monotony of constant sailing.

After leaving Japan, we crossed the narrow, but turbulent, Straits of Korea, and had abundant opportunity to test the respective merits of antipyrin and those other so-called remedies for seasickness, if we had been so minded; but experience is a good teacher, so we settled down on our backs and went to sleep, till the quieting down of our boat should inform us that we had crossed the straits and were again in smooth water.

I presume Dr. Caven could explain the reasons for the fact—which is, I suppose, pathological—that it is very easy to go to sleep when the boat is rocking, and there is a tendency to seasickness. Be it pathological or physiological, it is a blessed fact.

In due time we came in sight of Korea, and all thoughts of seasickness vanished as we beheld for the first time the bleak and rugged coast of the country which had for so many centuries been self-isolated from the rest of the world. Our boat appeared to be heading straight for the rocky shore, there being no appearance of either harbor or landing place; but soon we passed through a narrow opening, and there spread before us the large and excellent harbor of Fusan. Here we went ashore, and took our first glimpse of the people amongst whom we were to work. We did not expect to stay here, but it turned out that we remained for six weeks, being thus enabled to escape the dangers of acclimatization in the interior during the hot season. Here I had the opportunity to do some medical work, and gain an idea of the kind of patients I should have to deal with.

In the Toronto Hospital you see some bad cases, but it is reserved for a country like this to show what a combination of filth, vermin, and disease can do.

Syphilis is so common that whenever a patient with skin lesions appears the first thought is to look for evidences of that disease; then scrofula follows as a close second, while cases of necrosis and caries of bone come before you every day. Then the eye surgeon meets with a field of labor here of unexampled richness. Conjunctivitis, corneal ulcers, entropium, iritis, and cataracts flourish as on virgin soil. A very interesting class of cases came to us in Fusan very frequently, viz., lepers. I had not had the privilege of examining cases of this disease in Canada, so I should doubtless have been much puzzled by my first one if I had

not been warned of their frequency, and one or two pathognomonic signs described.

Attempts have been made here to treat these cases, but as yet with no success. In the district round Fusan, this disease is fairly common, but as yet I have only met with one case since I came to Seoul, and on enquiry I learned that this patient came from that part of Korea.

Having spent six pleasant weeks at Fusan, where I indulged in sea-bathing every day, we again took boat for Chemulpo, the seaport of Seoul, which is the capital of Korea, and our home. We were glad to meet on this boat with Dr. H. N. Allen, the first medical missionary to Korea, to whose skill in treating the king's nephew, in the year 1884, the opening of this country to missionary work is mainly due. He had been to the World's Fair as a representative of the Korean government, and was now returning as the official representative of the American government to Korea. We arrived in Chemulpo on August 28th, and next day reached Seoul. This is a city of some 350,000 inhabitants, about thirty miles from the seashore, situated in a saucer-like depression, with mountains on all sides, and surrounded by a stone wall and earthworks about thirty feet high. It is the capital of Korea, and the home of the king.

We soon settled down in a home of our own, and I at once entered upon the study of the language, which is said to be one of the most difficult in the world. In October our mission held its annual meeting, and I was appointed superintendent of the Royal Korean Hospital. This is a government institution, which the king established in 1884, in order to give Dr. Allen scope for the exercise of the skill which had so surprised them. For some years it was carried on vigorously, but of late it has gone backwards, until it scarcely deserves the name of a hospital. It is expected of me that I shall restore it to a position of usefulness. What the result will be only time can show.

It is fairly well equipped with surgical instruments, but there is no suitable operating room in which it would be safe to perform a major operation, and no room in which one would like to place a surgical case.

I have only attempted one major operation as yet, and it resulted badly, in that the patient died on the sixth day after it.

To give you an idea of the difficulties we have to contend against, I will just tell you how this patient was nursed. In the first place, I may say that the operation was for epithelioma of penis and scrotum, and it necessitated the amputation of the penis, the removal of a goodly portion of scrotum, both testicles, and the inguinal glands of both sides, so that there was great shock, and great care was needed in looking after the dressings. They, however, left him to himself for a time, and he pulled out the catheter and tore off all the dressings, so that when I got there next morning he

was lying with the entire wound exposed and saturated with urine. The wound gave good prospect of healing, but we failed entirely to control his method of urinating, so that he was constantly in pain and tore off his dressings, and finally pulled open the wound. It was very discouraging, and I told them I would not undertake any serious surgery again until the conditions were made more favorable.

It is the king's hospital, and I have succeeded in bringing the condition of it to his notice, and he is now considering a series of propositions which Dr. Allen and I have made with a view to its improvement, and I have hopes that it will yet become a hospital which I would not hesitate to have any of you drop in and see, though it will be quite unlike anything which you have ever seen in the western hemisphere, for, you know, everything is done by contraries in these oriental countries.

I am afraid I am spinning out my letter to too great a length, but I cannot refrain from reporting one case which came under my notice.

I was called one morning by one of our lady physicians to a house, and when I got there I found two lady doctors trying to deliver a woman of a child. They said they had been called in the morning, and on arrival found a baby two days old, and the mother again in labor. On examination, they found another child's head presenting in the vagina, but the woman labored in vain. They concluded that it was a two-horned uterus, and applied forceps to the head, but were unable to effect delivery, so sent for me. They had administered chloroform, and, as the forceps were on the head when I arrived, I hurriedly determined the kind of presentation, and then attempted to deliver. The forceps slipped off the head twice, and I then removed them, inserted my hand, turned the child, and delivered it feet first. Of course it was dead, and, as there had been no labor pains for a long time, I inserted my hand again and found that some placenta had been left in what had been supposed to be one horn of the uterus. I removed this, and then sought for the second placenta. This time my hand seemed to enter the uterus very easily indeed, and I grasped what felt like placenta and withdrew it. What was my surprise to find I had a piece of intestine in my hand instead of placenta, and then the whole case became clear. It was a case of twin conception, one fetus being intra-uterine, the other extra-uterine. The intra-uterine one was delivered normally in the absence of any physician, unless there may have been a native midwife. The extra-uterine fetus then presented at one side of the uterus, and either broke through the peritoneum by reason of its own pressure, or else was forced through by a midwife. Finding delivery impossible, they sent for a foreign doctor. We were unable to obtain the exact facts of the case. Of course the woman died in a very short time, it being impossible to do anything for her.

I have not read of just such a case, although such may have been recorded. If you think it worth while, you might place it on record for me. It may be that, in the opinion of those of wider experience than myself, it is not sufficiently uncommon to entitle it to be thus placed.

My double position as a medical missionary and an official of the government gives me a sphere of work somewhat different from that of my co-workers, and I have already attended professionally some of the relatives of the queen, and officials of high rank. I expect to have two foreign lady nurses at the hospital soon, and that will be a great help to me.

I expect also to open what may be the beginning of a medical school, as soon as I get the place in shape, and become able to speak the language with sufficient clearness to make myself understood.

I must now close. If you should like it, I shall be glad to report interesting cases occasionally. I hope to keep my eyes open to the scientific aspect of my cases, so that I may not get away behind you who live in more highly favored Canada.

There are twelve American and European physicians residing in Seoul at present, and we have formed the "Seoul Medical Association," which meets once a month for the discussion of medical topics and the presentation of cases. They have done me the honor of electing me as the first president. I think we must invite some of you to deliver an address here some time. It would only take from four to six weeks to come. I noticed that Dr. McDonagh visited Japan last summer. I extend a hearty invitation to any of you, if you should come as far as Japan, to come on to Seoul and see these strange people, who are as unlike Japanese or Chinese as we are. It is a pleasant trip from Japan, and would not add more than \$100 to the cost of the jaunt.

Yours sincerely,

O. R. AVISON.

Seoul, Korea, January 6th, 1894.

[We are greatly delighted to receive this interesting letter from Dr. Avison, and pleased to know that he is so comfortably situated. We shall look forward to many interesting communications from his ready pen. We need clinical information from all sources, but it is doubly interesting when of rare and complicated diseases.—ED.]

Book Reviews.

The Chicago Clinical Review, a monthly journal, edited by George Henry Cleveland, M.D., has lately made a departure that should be of great value to members of the profession as a means of ready reference. *The Review*, with its characteristic business push, has added a review department, in which the leading clinical articles in current medical literature are referred to. The references are given in an alphabetically arranged list, with the name of the author and the journal and date from which it is taken. It is really a boon to those who write, and also to those who wish to keep up with the times, where a limited number of journals only can be subscribed for. By the aid of this department, one can know just what is being published, when, and where. It ought to increase their subscription list.

A SYLLABUS OF LECTURES ON THE PRACTICE OF SURGERY. Arranged in conformity with the American Text-Book of Surgery. By Nicholas Senn, M.A., Ph.D., LL.D., Chicago. D. B. Saunders, Philadelphia. Price \$2.50.

Dr. Senn's well-known ability as a teacher readily fits him for the task he has undertaken. He has furnished what every teacher of surgery has undoubtedly felt the need of—some short guide to aid him in drafting his lectures to enable him to present the subject in hand as clearly and concisely as possible, and at the same time not to omit any point that would be of vital importance. The little book in hand—published by D. B. Saunders, Philadelphia—will meet this need undoubtedly.

ANTISEPTICS IN MIDWIFERY. By Robert Boxall, M.D., M.R.C.P., Assistant Obstetric Physician to and Lecturer on Practical Midwifery at the Middlesex Hospital; formerly Physician to the General Lying-in and Samaritan Free Hospital, London, Eng. H. K. Lewis.

We have here a couple of admirable lectures, delivered by Dr. Boxall in the Middlesex Hospital, on the important subject of the use of antiseptics in midwifery. He refers to the reports of the Registrar-General of Great Britain, and shows by them that the rate of mortality from puerperal septicemia is still very high in the United Kingdom, being over two per thousand deliveries. From his observation and records in hospital practice, he estimates that, for every death from puerperal fever, about thirty-two cases of illness, more or less serious, occur in addition. He shows that the use of antiseptics in recent years has greatly improved the condition of matters in maternity hospitals, while he

regrets that the Registrar's statistics show that, in general practice, the mortality rates are but little reduced, as a rule, and not at all in many districts.

He then describes, minutely, the technique of asepsis, or antisepsis, and the essential conditions to be fulfilled. In treating of the various antiseptic agents, he points out many of the chemical incompatibilities existing between them, and gives his opinion as to their comparative value. As we pointed out in our last issue, he places bichloride of mercury at the head of the list, but, at the same time, shows how it may be inert under certain conditions, and dangerous at other times. He shows conclusively that the use of antiseptic agents should be accompanied by a scientific knowledge of the subject, and the greatest possible care. This is a valuable little brochure, and should be read by all who practise the science and art of obstetrics.

THE CHRONIC DISORDERS OF THE DIGESTIVE TUBE. By W. W. Van Valzah, A.M., M.D., formerly Demonstrator of Clinical Medicine, Jefferson Medical College. 152 pages. Published by J. H. Vail & Co., New York.

This little book is a collection of the author's contributions on this subject in American journals during the past year, and deals with the subject in a thoroughly practical manner. It gives the general etiology and symptoms of the various disorders, but the principal part of the work is devoted to treatment, especially dietetic. It deprecates the habitual use of drugs in cases where no attempt, or very little, has been made to regulate the diet, but regards them rather in the light of accessories.

Under disorders of the stomach, the author limits the diet to lean meats, milk, and light broths, adding a little starchy food when the patient can bear it. To cleanse the stomach, he washes it out daily, and also gets the patient to take several glasses of hot water to aid this action. He believes we should try to regulate secretions by massage and electricity, rather than supplement them by giving drugs.

In intestinal troubles, the diet is still more limited. He advises the pulp of beef muscle in preference to a milk diet, as being more nutritious, bulk for bulk, and leaving no more unabsorbed element to pass down the intestine. Copious draughts of hot water are given to flush the alimentary tract thoroughly, and this should go on for several months. Frequent examination of the blood, urine, and feces should be made to ascertain whether the food is all digested or not. When the patient has decidedly improved, a fuller diet may be given, but only as long as he shows signs of improvement.

In chronic diarrhea and constipation, the author shows that they are brought on, in a great measure, by improper food, and that a restricted diet, supplemented later on, will go a long way towards a cure.

The binding and typography are first class.

SAJOUS' ANNUAL OF THE UNIVERSAL SCIENCES, 1893. The fourth volume contains extracts from the writings on diseases of the Skin, Eye, Ear, Nose, and Throat, Legal Medicine and Bacteriology. Each section has been carefully edited, there being much information for both specialists and general practitioners.

The chapter on Diseases of the Skin is edited by Dr. Arthur Van Harlington, of Philadelphia, and among his references is one by Maylard on the treat-

ment of burns. He believes in an antiseptic treatment from the first, and so washes the wound with a 1 in 2,000 solution of bichloride at once, covers it with some green protective soaked in the solution, and then puts on successively some borated lint, gutta percha tissue, and sublimated gamgee tissue. He leaves the dressings on for two or three days or more, until they become soiled with the discharges. He says this is a painless method of treatment. Besnier, in the treatment of eczema, says it is requisite to place the digestive organs in a healthy condition, and to regulate the diet to some degree. He recommends alkalies internally in the obese, congestive, uric acid and diabetic diathesis, sulphur in the young, ergotine in varicose eczema and congestive forms, and arsenic or arsenious acid in the chronic forms to modify the epithelial functions. Locally, inert powders, moist fomentations, and oily applications may be used.

Neisser has found tumenol very useful in ordinary ointments to relieve the pruritis of eczema or kindred diseases.

The section on Ophthalmology, edited by Dr. Charles A. Oliver, of Philadelphia, is very complete. The subject is reviewed in all its branches, there being many interesting cases, well illustrated by colored and other plates.

In diseases of the Vitreous, especially in connection with constitutional and specific maladies, Galezowski, of Paris, recommends the use of the ophthalmoscope to examine the ciliary circle, as he says it is invariably affected. He employs a weak convex lens joined to a very strong achromatic prism.

Gama Pinto, of Lisbon, and Risley and Gould, of Philadelphia, deprecate the routine practice of slitting up the canaliculus, and the use of large instruments for dilatation in affections of the lachrymal sac and nasal duct. Gould thinks the sac and duct might be emptied by pressure, and then a boric acid solution might be made to filter through if introduced in small quantities. In any case, only a small incision should be made when really required.

Barraza reports a case of restoration of the upper lid, when the skin and conjunctiva were the seat of a neoplasm (probably sarcoma), which required removal. The border of the lower lid was denuded, the two edges were sutured, and, after healing had taken place, they were divided and the skin and conjunctiva stitched together.

Hotz, of Chicago, recommends the use of Thirsch's (skin) grafts after the denuding operation for pterygium. He finds that the grafts readily adhere to the surface of the eyeball.

PfÜger, of Berne, uses trichloride of iodine, in strengths of 1 in 1000 to 4000, in cataract operations. He finds it antiseptic, non-irritant, and non-poisonous, and that it will not permanently affect the endothelium of the cornea, nor cause any opacities in it. For sub-conjunctival injections he uses 1 in 1000-1500, and in *ulcus serpens* 1 in 1000. The borders of the ulcer are then touched with a 1 in 10 solution.

Charles S. Turnbull, of Philadelphia, has edited the section on Diseases of the Ear, and among the cases noted is an account of excision of the stapes for non-suppurative inflammation of the middle ear by F. J. Jack, of Boston. He records sixteen cases, in all of which there was no inflammatory reaction, but a decided improvement in the hearing.

Garnault has found that the injection of five or six drops of a one per cent. solution of the double iodide of potassium and bismuth is very useful in cleansing the ear in otorrhea ; Janicke recommends the tetra-borate of sodium, either in solution or as a powder, and Delstancha finds that liquid vaseline, mixed with iodoform, relieves pain and serves to overcome any tendency to suppuration.

Politzer, of Vienna, states that treatment in cases of mastoiditis following influenza should be very prompt, as many cases end fatally. Paracentesis of the drumhead when an effusion appears, cold applications over the mastoid, and operative measures to remove the pus from the cells when manifested, should be undertaken as soon as possible.

Diseases of the Nose and Accessory Cavities is edited by Chas. E. Sajous, of Paris. He quotes Rixa, of New York, in which he extols terpin hydrate (turpentine acted on by alcohol and nitric acid) in hay fever. He gives fifteen grains (in five-grain capsules) during each of the three meals and at bedtime, giving another during the night, if the attack has occurred on a damp day. H. J. Loebinger, of New York, also recommends the drug for the asthmatic attacks, he giving fifteen-grain doses three times a day.

Bosworth, of New York, gives a record of eighty-eight cases of asthma in which the disease was cured or lessened in severity by active treatment of the existing abnormal conditions of the nose. These lesions were mostly nasal polypi, deflected septums, and hypertrophic rhinitis.

L. E. Blair, of Albany, also found some abnormalities of the nose in thirty-five cases of asthma, which, when treated, cured the asthma.

F. W. Draper, under Legal Medicine, reports a new method of resuscitation, by Laborde, of Paris, of those apparently drowned. The plan is to force open the mouth, catch hold of the tongue with the fingers, and, drawing it forward, impart to it about eighteen or twenty energetic and rhythmic backward and forward movements to the minute, thus stimulating the respiratory reflex. This may be done in conjunction with the ordinary methods, but Laborde believes it to be quite sufficient of itself.

Under the subject of the preparation of tissues for the microscope, A. G. Auld describes Fol's fluid for the rapid hardening of tissues. It contains : Saturated aqueous solution of picric acid, 10 parts ; one per cent. chromic acid, 25 parts ; water, 65 parts. The fresh tissue is cut into small pieces and placed in the fluid, and in from twelve to twenty-four hours it may be put in the freezing microtome and cut. In many cases no more staining is required, but alum-carmin or hematoxylin may be used. If left too long in the fluid, the tissues will become brittle.

The following pamphlets and books have been received :

THE CAUSE OF THE DISEASES OF WOMEN. By Chas. P. Noble, M.D.
Reprinted from the *International Medical Magazine*, August, 1893.

PHYSICAL CULTURE. A Manual of Home Exercise. Price 10c. Published by A. G. Spalding & Bros., manufacturers, Chicago, Philadelphia, and New York.

- REPORT OF THE KENSINGTON HOSPITAL FOR WOMEN, NON-SECTARIAN. From Oct. 10th, 1892, to Oct. 9th, 1893. No. 136 Diamond street, Philadelphia.
- THE RELATIONS OF URINARY CONDITIONS TO GYNECOLOGICAL SURGERY. By Chas. P. Noble, M.D. Reprinted from *American Medico-Surgical Bulletin*, October, 1893.
- REPORT OF TWO YEARS' WORK IN ABDOMINAL SURGERY AT THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA. By Chas. P. Noble, M.D., Surgeon-in-Chief. Reprinted from the *International Medical Magazine* for December, 1893.
- DENUDED CRANIUM. Its Treatment by Perforation of the External Table of the Skull and Thiersch Method of Skin Grafting, with report of case by Edmund M. Pont, M.D., Rutland, Vt. Reprinted from the *Medical Record*, Dec. 16th, 1893.
- REPORT OF A YEAR'S WORK IN MINOR GYNECOLOGICAL SURGERY IN THE KENSINGTON HOSPITAL FOR WOMEN, PHILADELPHIA. By Chas. P. Noble, M.D., Surgeon-in-Chief. Reprinted from the Transactions of the Philadelphia County Medical Society.
- ESTABLISHING A NEW METHOD OF ARTIFICIAL RESPIRATION IN ASPHYXIA NEONATORUM. By J. Harvey Dew, M.D., New York. With four illustrations. (Read before the New York Academy of Medicine, Feb. 2nd, 1893.) Reprinted from the *Medical Record* of March 11th, 1893.
- HOW TO USE THE FORCEPS, with an introductory account of the female pelvis and the mechanism of delivery. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Starling Medical College, Columbus, O. Revised and enlarged by Charles H. Bushong, M.D., Assistant Gynecologist and Pathologist to Demilt Dispensary, New York. Price \$1.75. E. B. Treat, publisher, 5 Cooper Union, N.Y., 1894.
- THE SURGERY OF THE URETERS. A Clinical, Literary, and Experimental Research. Read in the Section of Surgery and Anatomy at the forty-fourth annual meeting of the American Medical Association, June 8th, 1893. By Weller Van Hook, A.B., M.D., Professor of Surgical Pathology and Bacteriology, College of Physicians and Surgeons, Chicago ; Professor of Surgery in the Chicago Post-Graduate Medical School.

Medical Items.

DR. SYLVESTER, of Galt, has removed to Toronto.

DR. PAUL DIDAY, of Lyons, France, died January 8th, at the age of eighty-three.

DR. W. T. PARK, who was formerly practising in Listowel, has removed to Detroit.

It is announced officially that a branch of the Pasteur Institute will be established at Algiers during this year.

COOMBE LYING-IN HOSPITAL, DUBLIN.—Dr. Frederick W. Kidd has been elected master of this hospital in place of Dr. Hoey.

DR. GEO. ACHESON has taken Dr. Sylvester's office in Galt, where he is well known through his residence there in boyhood.

DR. DANIEL MITCHELL, of Blenheim, has been appointed associate coroner for Kent county, in the place of Dr. George E. Richardson, removed from the county.

DR. A. H. FERGUSON, of Winnipeg, has been elected Professor of Surgery in the Chicago Post-Graduate College, and expects for the future to be a resident of Chicago.

DR. ONESIME LANGLOIS, of Windsor, died on February 2nd, after a short illness with typhoid fever, at the age of forty-five. He was educated at McGill, and graduated in 1875.

DR. E. H. WILSON, of Brooklyn, has been appointed director of the department of Bacteriology in the Hoagland Laboratory, Brooklyn, in the place of Dr. Sternberg, resigned.

DR. G. STERLING RYERSON, M.P.P., paid a brief visit to Southern Virginia, where he went to recuperate after a short illness. He returned, full of health and strength, in the latter part of January.

JOHNS HOPKINS UNIVERSITY.—In the new medical school connected with this university there are now seventeen students, while forty-six graduates in medicine are attending the post-graduate lectures.

DR. DUNCAN McDONALD GORDON, of Lucknow, has been appointed associate coroner for the county of Bruce, and Dr. John Danby, of Richmond, has been appointed to a similar position in the county of Lanark.

DR. CHAS. O'REILLY, superintendent of the Toronto General Hospital, was seriously ill for six weeks with *la grippe*, complicated with broncho-pneumonia. He left Toronto, February 10th, for Hamilton. After a stay of three days there, he started for Philadelphia and Atlantic City.

DR. JAMES H. BURNS, of Toronto, is another of *la grippe's* victims. After a severe attack he was left very weak. He started for Atlantic City, February 13th, joining Dr. O'Reilly at Hamilton.

DR. GEO. WATSON, who practised in Toronto for a time, has been spending several months in New York, where he has been engaged in post-graduate work. He has lately returned to Canada and commenced practice in Listowel, having taken the office formerly occupied by Dr. Park.

WE are told by the *British Medical Journal* that a somewhat notorious quack of Dublin, named Farlow, but known as Dr. Franks, who was arrested a short time ago on a charge of endeavoring to procure a lady for immoral purposes, has been convicted and sentenced to twelve months' imprisonment.

WE spent two or three very pleasant hours lately in Montreal, guided by Dr. J. Chalmers Cameron through the many buildings that form McGill University. We saw everything that possibly could be seen in the time, and there can be no doubt but that, through the great generosity of open-hearted citizens, McGill University can well feel proud of its present position.

THE BATHURST AND RIDEAU MEDICAL ASSOCIATION.—The annual meeting of the Bathurst and Rideau Medical Association was opened in the City Hall, Ottawa. Dr. Rogers presided. Among those present were Sir James Grant, M.P., Sheriff Sweetland, Doctors Irwin, Horsey, Kidd, Grant, Playter, Dewar, Klock, Baptie, Small, Robinson, Rattray, and Shillington. Papers were read by Drs. Playter, J. A. Grant, C. P. Dewar, Klock, and A. J. Horsey. The annual dinner of the association was given in the Russell on the same evening.

A RICH GIFT TO A LIBRARY.—We learn from the *Journal of the American Medical Association* that Dr. Nicholas Senn, of Chicago, has given his collection of books to the Newbury Library, of Chicago. The actual cash value of this library is supposed to be more than \$50,000. It contains especially a large number of works in surgery, including, as it does, the collection of Dr. William Baum, of the University of Gottingen. Dr. Senn bought the whole of this library when he lived in Milwaukee; it came to him packed in fifty-two cases, making an entire carload. It is stated that the presentation was made chiefly through the recommendation of Mrs. Senn, who, knowing the great worth of the collection, appreciated the great danger to which it was exposed from fire or other casualty while it was kept in a private residence.

HIGHER MEDICAL EDUCATION.—In pursuance of the policy recently announced in the resolution to be presented to the American Medical College Association, the trustees and faculty of Rush Medical College have decided to require four years' attendance at college from students who begin the study of medicine this year with a view to graduation in 1898; however, those who have already studied medicine one year or more with a preceptor, so that the

four years of study, already required, will be completed before July, 1897, may graduate after three courses of lectures as heretofore. To encourage proper preliminary study, graduates in arts and sciences from high-grade colleges, and graduates in pharmacy and dentistry from colleges requiring a proper amount of study and two full courses of lectures, will, until further notice, be allowed to graduate after an attendance on only three courses of lectures.

ONE of the most skilful dentists in New York gives these rules for the care of the teeth: Use a soft brush and water the temperature of the mouth. Brush the teeth up and down in the morning, before going to bed, and after eating, whether it is three or six times a day. Use a good tooth powder twice a week, not oftener, except in case of sickness, when the acids from a disordered stomach are apt to have an unwholesome effect upon the dentine. Avoid all tooth pastes and dentrifices that foam in the mouth; the lather is a sure sign of soap, and soap injures the gums, without in any way cleansing the teeth. The very best powder is of precipitated chalk; it is absolutely harmless, and will clean the enamel without affecting the gums. Orris root or a little wintergreen added gives a pleasant flavor, but in no way improves the chalk. At least a quart of tepid water should be used in rinsing the mouth. A teaspoonful of Listerine in half a glass of water used as a wash and gargle after meals is excellent; it is good for sore or loose gums; it sweetens the mouth, and is a valuable antiseptic, destroying promptly all odors emanating from diseased gums and teeth. Coarse, hard brushes and soapy dentrifices cause the gums to recede, leaving the dentine exposed. Use a quill pick, if necessary, after eating, but a piece of waxed floss is better. These rules are worth heeding.

ELEVENTH INTERNATIONAL MEDICAL CONGRESS.—A letter directed to the undersigned by the secretary-general of the Eleventh International Medical Congress, and dated December 19th, 1893, contains the following communications:

"American members will pay on the English, French, and Italian railways single fares for double journeys, and will obtain a reduction of twenty per cent. on fares for Italian round-trip tickets.

"The documents required for their identification will be sent to you in January, and Americans intending to visit the congress will have to apply to you for them.

"Full particulars concerning the journeys will accompany the documents."

From former communications the following are herewith quoted: The members' fee is five dollars; that of their wives or adult relations two dollars each. Checks or money orders may be sent to Prof. L. Pagliana, Rome, Italy. Credentials have been promised in the near future. When they arrive (none were received last year), they may be too late for many who have started or are about to start. The undersigned, who is not informed of the cause of delay, proposes to supply, in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. The North German Lloyd has promised to recognize them. It is suggested, besides, that a passport may increase the traveller's facilities.

Only the North German Lloyd (Bowling Green) and the Compagnie Générale Transatlantique (3 Bowling Green) have thought fit to grant any reductions to Congressists.

The reductions on Italian railways are available from March 1st to April 30th. A. Jacobi, M.D., 110 W. 34th Street, New York, January 11th, 1894.

THE DISCOVERY OF CHLOROFORM.—The *Century Magazine* for January, which is an exceedingly brilliant number, contains a paper on "Sir James Simpson's Introduction of Chloroform," written by his daughter. Following up the American discovery of sulphuric ether as an anesthetic, we are told of Simpson's infinite pains and frequent disappointments in his search for a more effectual means of avoiding the agonies of operation. Sir James was daring, even to rashness, in his experiments, and, as a rule, tried the effect of agents upon himself, more than once endangering his life in doing so. The account of the first trial of chloroform reminds one somewhat of the bacchanalian orgies of Squire Western and his bucolic companions; and, despite the weighty interests with which the sitting was fraught, we cannot repress a smile at the ludicrous disappearance of the investigators "under the table." On returning home after a weary day's labor, Dr. Simpson, with his two friends and assistants (Drs. George Keith and Matthews Duncan), sat down to their somewhat hazardous work in Dr. Simpson's dining room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material which, on account of its great weight, he had hitherto regarded as of no use. It happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of loose paper; and, with each tumbler newly charged, the inhalers resumed their occupation. Immediately an unwonted hilarity seized the party; they became bright-eyed, very happy, and very loquacious, expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, a brother-in-law of Dr. Simpson. But, suddenly, there was a talk of sounds being heard like those of a cotton mill, louder and louder; a moment more, then all was quiet; then a crash. On awaking, Dr. Simpson's first perception was mental. "This is far stronger and better than ether," said he to himself. His second was to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned about, and saw Dr. Duncan beneath a chair; his jaw had dropped, his eyes were staring, his head was bent half under him; he was quite unconscious, and was snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs making valorous efforts to overturn the supper table, or, more probably, to annihilate everything that was on it. After such convincing testimony to its power, Sir James lost no time in publicly proclaiming the virtues of the new anesthetic.—*British Medical Journal*.

MEDICAL COUNCIL DIVISIONS AND CANDIDATES.—In accordance with the provisions of the amendment to the Medical Act, there will be seventeen territorial representatives, instead of twelve, in the next council, the divisions being arranged as follows:

- (1) Counties of Essex, Kent, and Lambton. The present representative is Dr. Bray, of Chatham, who is likely to be re-elected. We have not heard of an opponent.
- (2) Counties of Elgin, Norfolk, and Oxford. Two members of the present council, Drs. Williams and Fulton, will be in this division.
- (3) Middlesex. Dr. W. F. Roome, M.P., of London, will probably be elected for this division.
- (4) Huron and Perth. It is generally understood that Dr. R. W. Bruce Smith will be the new member.
- (5) Waterloo and Wellington.
- (6) Bruce, Grey, and Dufferin. Dr. Henry, of Orangeville, is the present member, and will probably be a candidate.
- (7) Wentworth, Halton, and Peel. Dr. Miller, of Hamilton, the present member, is not likely to be a candidate. Drs. Griffin and Shaw, of Hamilton, and Dr. Heggie, of Brampton, are mentioned as probable candidates.
- (8) Lincoln, Welland, Haldimand, and Brant. There will be a hot contest here between Dr. Philip, of Brantford, the present member, and Dr. Armour (of "Defence" fame), St. Catharines.
- (9) Simcoe, Muskoka, Parry Sound, Nipissing, and Algoma. Dr. Law, of Beeton, is mentioned as a probable candidate.
- (10) Toronto, west of Yonge street. Dr. A. J. Johnston, the present member, will be a candidate. Opposition is promised.
- (11) Toronto, east of Yonge street. Dr. E. J. Barrick will be a candidate. Opposition doubtful.
- (12) Ontario, Victoria, and York, exclusive of Toronto. The candidates at present said to be in the field are Drs. Cotton, Lambton Mills; Burrows, Lindsay; and Sangster, Port Perry. This fact was unknown to us when THE PRACTITIONER of last month was issued.
- (13) Northumberland, Peterborough, Durham, and Haliburton. Dr. McLaughlin, of Bowmanville, will probably be elected.
- (14) Prince Edward, Hastings, and Lennox. Two of the present members, Drs. Day and Ruttan, will be in this division. Strong efforts are being made to induce Dr. Day to be a candidate for re-election.
- (15) Frontenac, Addington, Renfrew, and Lanark. Dr. Spankie, of Kingston, will probably be a candidate.
- (16) Leeds, Grenville, and Dundas.
- (17) Carleton, Russell, Prescott, Glengarry, and Stormont. Two present members will be in this division—Drs. Bergin and Rogers.

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

The following is the preliminary programme of the Congress of American Physicians and Surgeons, which will be held in Washington, D.C., May 29th, 30th, 31st, and June 1st, 1894. President, Alfred L. Loomis, M.D., New York city; vice-presidents, *ex officio*, represent the different affiliated societies;

chairman of the Executive Committee, Landon Carter Gray, M.D., New York city; treasurer, John S. Billings, M.D., Washington, D.C.; secretary, William H. Carmalt, M.D., New Haven, Conn.

The meetings of the Congress will all be held in Metzert's Music Hall, corner of Twelfth and F streets, N.W.

TUESDAY, May 29th. 3 p.m.—Congress opened by the chairman of the Executive Committee. From 3.30 to 5 p.m.—General session of the Congress under the direction of the Association of American Anatomists.

WEDNESDAY, May 30th. From 2 to 3.30 p.m.—General session of the Congress under the direction of the American Climatological Association. From 3.30 to 5 p.m.—General session of the Congress under the direction of the American Dermatological Association. 7 p.m.—Dinner to the guests of the Congress at the Arlington Hotel.

THURSDAY, May 31st. From 2 to 3.30 p.m.—General session of the Congress under the direction of the American Association of Genito-Urinary Surgeons. From 3.30 to 5 p.m.—General session of the Congress under the direction of the American Gynecological Society. 7.30 p.m.—Address by the president of the Congress, Dr. Alfred L. Loomis, Professor of Pathology and the Practice of Medicine in the University of the City of New York, on "The Influence of Animal Experimentation on Medical Science." To be followed by a reception.

FRIDAY, June 1st. 1.30 p.m.—Business meeting of the Congress. From 2 to 3.30 p.m.—General session of the Congress under the direction of the American Laryngological Association. From 3.30 to 5 p.m.—General session of the Congress under the direction of the American Neurological Association.

SUBJECTS FOR DISCUSSION.

By the Association of American Anatomists: "Morphology as a Factor in the Study of Disease"—Opened with a paper by Dr. Harrison Allen, Professor of Comparative Anatomy in the University of Pennsylvania, and discussed by Dr. Thomas Dwight, Professor of Anatomy in the Harvard Medical School; Dr. Frederic H. Gerrish, Professor of Anatomy in the Bowdoin College; Dr. Frank Baker, Professor of Anatomy in the University of Georgetown; and Dr. Burt C. Wilder, Professor of Physiology, Comparative Anatomy, and Zoology in Cornell University.

By the American Climatological Association: "Sewer Gas"—(1) "The Bacteriology," by Dr. Alexander C. Abbott, First Assistant in the Laboratory of Hygiene, University of Pennsylvania; (2) "As a Cause of Disease," by Dr. Abraham Jacobi, Professor of Diseases of Children in the College of Physicians and Surgeons of New York city.

By the American Dermatological Association: "The Distribution and Control of Leprosy in the United States"—(1) "The Distribution." Opened with a paper by Dr. J. Nevins Hyde, Professor of Skin and Venereal Diseases in Rush Medical College, Chicago, and discussed by Dr. Wm. A. Hardaway, Professor of Skin Diseases in the Missouri Medical College, St. Louis, and Dr. James E. Graham, Professor of Medicine and Clinical Medicine in the University of Toronto. (2) "The Prophylaxis and Treatment," with a paper

by Dr. James C. White, Professor of Dermatology in Harvard Medical School, and discussed by Dr. George H. Fox, Professor on Diseases of the Skin in the College of Physicians and Surgeons of New York city; Surgeon-General W. C. Wyman, U.S.M.H. Service; and Dr. Joseph D. Bryant, Professor of Anatomy and Clinical Surgery, Bellevue Hospital Medical College, New York city.

By the American Association of Genito-Urinary Surgeons: "Nephritis in its Surgical Aspects"—Opened with a paper by Dr. Edward L. Keyes, of New York city; followed by a paper from Dr. George M. Sternberg, Surgeon-General, United States Army, on "The Bacteriology of Nephritis," and discussed by Dr. George Chismore, of San Francisco, Cal.; Dr. L. Bolton Bangs, Surgeon to St. Luke's Hospital, New York city; Dr. Francis S. Watson, Instructor in Genito-Urinary Diseases in Harvard Medical School, Boston, Mass.; and Dr. W. N. Wishard, of Indianapolis, Ind.

By the American Gynecological Society: "The Conservative Surgery of the Female Pelvic Organs"—Papers will be read by Dr. Wm. M. Polk, Professor of Obstetrics and the Diseases of Women and Children in the University of the City of New York, and Dr. Wm. Goodell, Honorary Professor of Gynecology in the University of Pennsylvania.

By the American Laryngological Association: "The Surgery of the Accessory Sinuses of the Nose"—To be discussed by Dr. J. Solis-Cohen, Professor of Laryngology, Jefferson Medical College, Philadelphia; Dr. F. J. Knight, Professor of Laryngology in Harvard Medical School; Dr. George M. Lefferts, Professor of Laryngology and Diseases of the Throat in the College of Physicians and Surgeons of New York city; Dr. F. H. Bosworth, Professor of Diseases of the Throat in Bellevue Hospital Medical College; Dr. William C. Glasgow, of St. Louis, Mo.; and Dr. E. Fletcher Ingalls, of Chicago, Ill.

By the American Neurological Association: "The Influence of Infectious Processes on the Nervous System"—(1) "Pathology and Etiology," by Dr. James J. Putnam, Lecturer on Nervous Diseases in the Harvard Medical School; (2) "The Relation to General Nervous Diseases," by Dr. E. C. Seguin, of New York; (3) "The Relation to Mental Disease," by Dr. Charles K. Mills, Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania; and (4) "The Therapeutics," by Dr. F. X. Dercum, of Philadelphia.

OBITUARY.

THE LATE DR. WILLIAM F. HUTCHINSON.—At a meeting of the Executive Council of the American Electro-Therapeutic Association, the following resolutions on the death of Dr. William F. Hutchinson, of Providence, R.I., were unanimously adopted:

Whereas, it becomes our painful duty to announce the death of Dr. William F. Hutchinson, one of the Foundation Fellows of the American Electro-

Therapeutic Association, as well as the First Vice-President of the same ; and

Whereas, in his death we lose a warm and faithful friend, a valued associate, and an accomplished member of the profession ; therefore be it

Resolved : That this association desires to place on record its appreciation of his genial spirit, his active co-operation in the work of the association, and of his deep interest in the scientific questions relative to his chosen profession.

Resolved : That we express our sincere regret and heartfelt sorrow at his death.

Resolved : That we tender to his sorrowing family an expression of our profound sympathy in their great loss.

THE CANADIAN PRACTITIONER

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Original Communications.

THE INDICATIONS FOR OPERATION IN SPINAL LESIONS.*

BY GEORGE A. PETERS, M.B., F.R.C.S.,

Associate Professor of Surgery and Clinical Surgery, University of Toronto ; Surgeon to the Victoria Hospital for Sick Children ; Assistant Surgeon, Toronto General Hospital.

FOR the purposes of this paper, I shall define the term "operation" as meaning exposure, by cutting, of the parts involved in or suffering from the effects of the lesion, with a view to relieving the symptoms by removal of the causes upon which they depend. This definition, then, excludes from present consideration such aids to restoration of parts to their normal relations, after injury, as extension and counter-extension, suspension, manipulation, etc.

The operation essentially consists in cutting through the soft parts in or near the central line of the back, and removing the spines and laminae of the requisite number of vertebrae so as to fully expose the spinal cord and its membranes at the seat of the suspected lesion. This operation, which, as a systematic proceeding, is of comparatively recent date, was at first called "trephining the spine," but is now known by the euphonious and expressive term, "laminectomy." Even in this progressive age, when it is the habit of operating surgeons, securely entrenched behind walls of asepticism and antisepticism, to make light of the effects of even serious

* Read before the Toronto Medical Society, March 1st, 1894.

operations *per se*, I am unable to bring myself to the point of regarding this operation as "a perfectly safe one," as it has been called by some who have written on the subject. On the contrary, I think it must be regarded as an operation of considerable magnitude, often requiring an incision ten or twelve inches long; an operation, moreover, which involves, by its very nature, the production of a compound fracture of the great supporting column of the body, and which lays bare the elongated nerve centre which forms the means of communication between the brain and the other parts of the body. Such an operation, I submit, cannot be esteemed as otherwise than a serious one—not, in itself, such as to be very greatly dreaded in a perfectly healthy subject, but quite serious enough to be capable of tipping the scale in the wrong direction in a subject whose vitality is already greatly depreciated by grave disease or severe injury. We must, accordingly, approach the study of this question with the candid admission that, in operating in spinal lesions with a view to removal of their cause, we are introducing an element which may, under the existing circumstances, form a distinct menace to the life of the patient. The only cases, then, in which such operation could be deemed admissible are those in which the lesions are of such severity as to cause:

(1) Paralysis of motion or sensation, or both, affecting a considerable part of the body.

(2) Symptoms of irritation of the spinal cord, or some of the nerves coming off from it; such as (*a*) spasmodic or tonic contractions of some of the muscles of the trunk or extremities, or (*b*) intolerable and intractable pain.

Some of these conditions, moreover, must be present, not as the result of acute or chronic disease of the spinal cord itself, but as the result of some lesion capable of being attacked surgically, before the question of laminectomy can even be entertained.

CLASSIFICATION OF CASES REQUIRING OPERATION.

In a paper published in *International Clinics*,* January, 1892, I endeavored to include all such cases under three headings:

(1) In the first class are placed those in which the symptoms come on suddenly, and are the result of violence to the vertebral column, causing fracture, dislocation, or hemorrhage. In this class I would also place punctured wounds entering the neural canal.

(2) To the second class belong those in which the symptoms develop slowly, and are due to compression or irritation, caused by the products of inflammatory action, such as callus and cicatricial tissue following injury; the caseous products or granulations of a tuberculous process, as in Pott's disease; and syphilitic gummata.

* Tumor of Spinal Meninges. *International Clinics*, January, 1892.

(3) In the third class the symptoms also come on slowly and progressively, and are due to compression by the growth of a neoplasm, malignant or benign.

It is interesting, and illustrative of the rapid march of medical science, to look back a few years and note the standing at that time of such a surgical proceeding as that which it is the object of this paper to consider. One is somewhat surprised to learn that so recently as in the year 1884 the operation of laminectomy, or trephining the spine, had no standing at all. Whereas in every third or fourth number of any of the medical journals of to-day which enjoy a large contributory constituency one will meet with a record of such a case for relief in one or other of the above-mentioned classes, in the year 1884 (taken at random) I did not find a single case recorded in any of the following representative journals: *The Lancet*, *The British Medical Journal*, *The Medical and Surgical Reporter* (Philadelphia), *The Medical News* (Philadelphia). In the *Glasgow Medical Journal* of February 15th, 1884, Dr. Macewen is reported as having shown before the medical society a case in which he had performed laminectomy for paraplegia from Pott's disease, with an ideal result. In these journals, it must be borne in mind, there are numerous cases recorded of fracture of the spine, and in some of them, at least, the symptoms recorded are such as certainly would, in the present day, be taken as strongly indicating the performance of the operation.

In reference to the operation for the relief of symptoms in Pott's disease, although Macewen commenced operating on these cases in 1884, the innovation made such slow headway that in Erichsen's "Surgery," published in 1888, the following sentence occurs: "The treatment of paraplegia in spinal caries presents nothing special. The limbs may be rubbed to maintain their nutrition. No operation such as trephining the spine is justifiable, as the compression is due to disease of the membranes, and not to displacement of the bones."

In regard to cases belonging to my third class, as is very well known the first case on record is that of Horsley and Gowers, in 1887.

INDICATIONS WHEN SYMPTOMS ARE THE RESULT OF VIOLENCE.

In the first class of cases, viz., those in which the lesion is due to sudden violence to the vertebral column, we may, perhaps, profitably distinguish between fractures due to direct violence, and those due to indirect violence. In the latter cases, where the fracture is due to falls from a height, with a doubling over of the body, or where it is due to a crushing force applied to the ends of the spine, as often happens in driving under a low doorway, the degree and character of the deformity are often such that it is impossible to doubt that there has been a total destruction of a segment of the cord. In such deplorable cases it must be acknowl-

edged that the surgery of to-day has nothing to offer in the way of relief. It has been shown that degenerations begin to take place within about three days, and consequently all thought of restoration from suturing the lacerated ends of the cord must be abandoned as hopeless. Abbé's suggestion to transplant some of the nerves coming off above the lesion into the stump below ; or to graft in a segment of the cord of (say) a calf ; or to remove a vertebral body in order to bring the divided ends of the cord into apposition without tension, must be looked upon as more venturesome than plausible, and as not having a legitimate basis in facts known in regard to the repair of injury in the tissue of nerve centres, either in man or the lower animals.

When we know, then, that our patient has sustained an injury such as, by its very nature and extent, must have severed the spinal cord completely, there is, I believe, nothing to do but abandon him to his lamentable fate, and endeavor to make the remainder of his sorry days as tolerable as possible. If the lesion happen to be low down, the patient may live for months, or even years ; but his after condition is always, to put it mildly, most unsatisfactory, and his end is usually hastened by the occurrence of bedsores, cystitis, etc.

There are, however, fortunately, some cases of fracture due to indirect violence in which the deformity may not be so great as to make it certain that the cord has been crushed by the bones. In such cases, the symptoms may be due to division of the cord ; but, on the other hand, they may be due to compression by bone or clot. The treatment of such cases will be governed by the same considerations as guide us in cases of fracture by direct violence ; hence we may consider both together.

In fractures by direct violence the symptoms may be due : (1) To complete severance of the spinal cord ; (2) to compression of the cord between two fragments of bone ; (3) to compression by blood clot, either intra- or extra-dural. Now, it must be admitted that it is generally impossible to decide which of these conditions is present. If there were a clear history of sensation or voluntary movements being present in the parts supplied by the cord below the seat of injury, subsequent to the reception of the violence, a gradual disappearance of these symptoms would presumably be due to a hemorrhage. Or if, on examining the patient some hours after the injury, we find areas of sensation or hyperesthesia, or if there are occasional cramps in the muscles, accompanied by pain, we might conclude that the cord is compressed by bone or clot, but that it is not divided. But, as Golding-Bird* says, "Often the history given of the accident is so obscure, and the result of an examination so uncertain, that it becomes a matter of pure speculation whether the para-

* Golding-Bird. *British Medical Journal*, May 23rd, 1891, p. 1124.

lytic symptoms are due to pressure by a broken neural arch, or by blood clot, or to division of the cord." It must, moreover, be admitted that cases presenting symptoms of complete paraplegia sometimes recover without operation. Dr. Beevor* reports such a case, in which the patient was paraplegic for ten weeks, but within a year was able to get about with some assistance. In the same number of the *British Medical Journal*, Mr. Tatham reports † a similar case, in which there was complete paralysis of motion and sensation below the neck, with embarrassment of respiration and deglutition, and incontinence of urine and feces. He remained in this condition for three months, but subsequently regained enough power to enable him to walk ten or twelve miles.

I believe, however, it will be generally conceded that these are exceptionally fortunate results, and that in a vast majority of cases in which paraplegia occurs as the result of injury—particularly if the injury be high up—spontaneous recovery does not take place, but the patient, after a more or less painful and tedious illness, perishes miserably from cystitis, bedsores, or pulmonary disease.

Not forgetting the fact, then, that in a few exceptionally happy instances recovery takes place in cases which were apparently hopeless, it appears to me that we consult the best interests of the greatest number of our patients by submitting to operation (unless there is some special contraindication) all cases of fracture by indirect violence in which the deformity is slight, but in which there are well-marked symptoms, and also all cases of fracture by direct violence with symptoms. No surgeon in his senses would, of course, be so rash as to advocate operation in a case in which it is certain that the patient can not recover, either with or without operation. But where it is practically certain that the patient must die without operation, and where an operation holds out even a forlorn hope of relief, I think the surgeon should have the courage to give the patient the last chance by operating. Very many of such cases will certainly die, but perhaps a few may be saved. The argument sometimes used, that a failure tends to bring reproach both upon the surgeon and his art, is an unworthy one. The surgery of to-day can very well afford to stand upon its merits, and the surgeon must be prepared to bear with equanimity and patience any unjust reflections which may be made by the patient's friends after the event. Very often, fortunately, the onus of deciding whether to operate or not is taken out of the hands of the surgeon by the patient or his friends after hearing a fair and unbiased statement of the case; but should the decision fall to the surgeon, he must be prepared to act up to his convictions.

As an example of a special contraindication, I would consider it improper,

* Dr. Beevor. *British Medical Journal*, Nov. 3rd, 1888, p. 994.

† Tatham. *British Medical Journal*, Nov. 24th, 1888, p. 1163.

as a rule, to operate immediately on a case in which there was a clear history showing the compression to be due to hemorrhage. In such a case one might, I think, without laying himself open to the charge of having committed a surgical blunder, wait some days, or even weeks, in the hope of absorption taking place. There is nothing more uncertain than the conditions which may be actually present when the slow onset of symptoms points to compression from hemorrhage. The upper limit of the clot may be pretty accurately detected by the symptoms, but we cannot tell how far down the cord it may extend. Then the clot may be extra-dural, intra-dural, or it may be a very minute clot within the substance of the cord itself—usually in the gray matter. In the latter situation it is, of course, beyond the reach of the surgeon, and the ultimate condition is entirely dependent upon the success which may attend nature's efforts at removal. If, however, the lesion were so high up as to embarrass respiration or deglutition, the operation certainly should not be postponed, but the cord and its membranes should be exposed, in the hope that the pressure may be removed before the embarrassment of respiration has induced pulmonary disease.

Having performed laminectomy, then, and exposed the cord lying in its membranes, we must be guided as to the further steps of the operation by what we find to be the conditions present. Should we find the dura mater torn, and the cord lacerated or crushed, the most we can do is to remove any fragments of bone, blood clot, or other débris, and leave the result to nature. We may stitch up the dura, if that be found possible, but there is little or nothing to hope for from stitching the severed cord. We may, however, find the dura intact, but be able to detect that the cord is lacerated and crushed within—the soft, friable cord having been destroyed by a force which the more resistant dura was able to withstand. In such a case, I believe nothing is to be gained by opening the dura, and I am of opinion, moreover, that harm may result from so doing. The draining away of considerable quantities of cerebro-spinal fluid must, it appears to me, have an unfavorable impression on the circulation in the brain, and this impression is borne out by two cases which have fallen under my own observation, to one of which I shall refer later.

In regard to punctured wounds of the vertebral column with symptoms of division or compression of the cord, I feel that it is very difficult to indicate a line of treatment. I should be inclined to assume an attitude of "masterly inactivity" at first, in the hope that union by first intention might occur. On the first symptoms of inflammation, however, I should be prepared to cut down, removing an arch, if necessary, in order to establish perfect drainage, and so to prevent spread of an inflammatory process along the neural canal.

INDICATIONS WHEN SYMPTOMS ARE DUE TO PRESSURE OF
INFLAMMATORY PRODUCTS.

In our treatment of the second class of cases, those, namely, in which the symptoms are due to the pressure of inflammatory products, in the broad sense of that term, we must have due respect to the element of time. During the repair of a fracture, for example, temporary callus may be thrown out to such an extent as to produce compression. As recovery proceeds, however, the excess of the callus will probably be absorbed, with an accompanying restoration of the functions of the cord. In such cases, moreover, degenerations do not appear to take place early, and cystitis, bedsores, etc., are not likely to present themselves as complications, so that operative interference should not be undertaken until nature has been given ample opportunity to exert her powers of absorption and restoration. It is impossible to exact a time-limit in such cases, and much must depend on accompanying or resulting symptoms; but we must bear in mind the possibility of such callus persisting, and also the possibility of a cicatricial band forming in such a position as to compress the cord and vitiate its functions. Hence we may be called upon to operate in such cases when nature has proven herself unequal to the task of restoring the abrogated functions of a cord which has suffered from compression.

LAMINECTOMY IN POTT'S DISEASE.

It is somewhat remarkable that the operation of laminectomy has scored its most brilliant successes in cases of compression-paraplegia due to Pott's disease. There is no doubt that cases of spontaneous recovery from this condition are by no means rare. And it may perhaps be objected that the cases in which the functions of the cord are restored after operation are those which would have recovered if left alone. This, however, is scarcely a generous criticism, for the recorded cases are those in which recumbency, rest, and extension have been given a fair trial without resulting benefit. It may be claimed, on the contrary, that in many of the cases in which operation has proved successful it was undertaken under the most unfavorable circumstances, when the patient was greatly enfeebled, and perhaps had suffered from cystitis, bedsores, and pulmonary complications, as the result of the deformity and compression.

As may very readily be conjectured, there is a very wide difference of opinion as to the time when cases of compression-paraplegia, due to Pott's disease, should be made the subjects of operative treatment. As representing the conservative side of the argument, I cannot do better than quote from a paper by Mr. Southam,* of Manchester. In remarks upon a case of operation in his own practice, which terminated very satisfactorily,

* *British Medical Journal*, March 26th, 1892, p. 655.

he says: "Before performing laminectomy for caries, accompanied by pressure symptoms, it must be borne in mind that with complete rest in the recumbent position, and fixation of the spine, the paralysis will, as a rule, gradually disappear. Consequently, operative interference is only indicated in a very small proportion of cases, and should not be adopted until palliative treatment has been given a fair trial, and then only when no benefit has resulted, or when the symptoms are progressing in spite of treatment."

The views of those who hold a contrary course of treatment were forcibly upheld by Mr. Arbuthnot Lane,* in a paper before the Clinical Society of London, in which he "urged very strongly the advisability of operating on these cases as early as possible, if a short period of recumbency is not followed by definite improvement." In that paper he reported eleven cases of compression-paraplegia from Pott's disease on whom he had performed laminectomy. These had suffered from paraplegia during periods varying from three weeks to eleven months. One case, "an extremely feeble, pallid child," died, a few hours after the operation. Another died, six days after operation, "from a sudden and excessive hemorrhage from polypus of the rectum." Two other cases were unsuccessful. In the other seven cases the results were most gratifying, the paraplegia being completely and permanently cured in each case. In remarking upon these cases, Mr. Lane observes "that the conditions found at the operation appeared, in every case, to preclude the possibility of recovery of the spinal column and cord without surgical interference." Also, "that several of these cases would of a certainty have died from chest or bladder complications, from which they were suffering, and which only disappeared when they recovered power over their intercostal and abdominal muscles." He claims, also, that, in addition to removing the paraplegia, the operation enables the surgeon to remove large quantities of carious bone and tuberculous matter by scraping and irrigation, and permits repeated local applications of iodoform and other antiseptics.

In the discussion which followed the reading of this paper, Mr. Davies-Colley mentioned a case in which he had operated twice, each time removing much caseous material, but without any relief to the paraplegia—indeed, the child was distinctly worse after each operation. Mr. W. H. Bennett remarked that, inasmuch as some patients recovered after there was paralysis accompanied by deformity, he would watch the patient well before operating. Mr. Bowlby related two cases in which rapid recovery followed, although no pus was found at the time of operation.

* *British Medical Journal*, March 31st, 1891, p. 949.

Dr. Alfred Parker,* of Hull, reports a successful case, in which he states "that the condition of the vertebræ at the time of operation indicated conclusively that no treatment short of laminectomy would have been of use." He closes his remarks thus: "It cannot be doubted that a careful laminectomy in progressive cases is far superior to a persistent perseverance in a policy of rest and extension for an unlimited time." These are merely a few sample cases in which the operation has been done with varying success. The reports, on the whole, are encouraging, but we cannot be blind to the fact that shoals of unsuccessful cases have probably occurred, but, owing to the fact that most operators shrink from appearing in a bad light, have never been reported.

On reviewing the facts at my disposal, *pro* and *con*, I am strongly inclined to give my allegiance to the advisability of operating in all progressive cases which prove unresponsive to a few weeks' conscientious treatment by rest, fixation, and extension. We may, by following this rule, sometimes operate on a case which would have recovered if left alone; but it is certain, I think, that many such cases must inevitably perish unless they are saved by operation.

PRESSURE BY SYPHILITIC GUMMA.

Should symptoms of a slowly developing paraplegia, monoplegia, or monospasm accompany or supervene upon an attack of syphilis in its tertiary stage, the operation of laminectomy at the site of the compression should certainly not be resorted to until at least three months' vigorous treatment by large doses of iodide of potash have elapsed. Although ascending and descending degenerations are said to commence within three days after division of the cord, the latter will bear compression without these changes occurring for a much longer period. Hence the urgency is not great in such cases. Should the symptoms resist this treatment, however, I am of opinion that we should treat the case as one of benign tumor, and endeavor to remove it by laminectomy.

COMPRESSION-PARAPLEGIA DUE TO THE GROWTH OF NEOPLASMS.

The bodies of the vertebræ are not infrequently the seat of secondary cancerous growths. It has been stated that when a primary cancer is situated in the thyroid gland, secondary growths are peculiarly apt to occur in the spinal column. Primary sarcomata also occasionally occur in the vertebræ. Sooner or later, if the patient survive sufficiently long, the tumor will project into the neural canal and cause compression-paraplegia. In such cases no operation is justifiable, as it would be impossible to promise even temporary relief from such interference.

Benign tumors of various kinds have been found within the neural

**British Medical Journal*, April 15th, 1893, p. 796.

canal, either within or without the dura. Lipomata and myxomata have been found outside the dura, and these but rarely. Within the dura, syphilitic gummata, solitary tubercular masses, myxomata, sarcomata, psammomata, lipomata, and lymphadenomata* have been known to occur.

Dr. I. H. Cameron, of this city, removed, in 1892, an angio-fibroma which had evidently commenced within the membranes, probably having its origin in the arachnoid or inner surface of the dura. The diagnosis in such cases is usually difficult, and is arrived at largely by a process of exclusion, though in some instances the symptoms are sufficiently positive. I have no hesitation in urging the advisability of operation in all cases in which there is a reasonable probability that compression-paraplegia is due to the presence of a benign tumor. In fact, in no class of cases does the operation of laminectomy hold out better hopes than in these. The patient is usually in a good condition as regards his general health, and the parts are not in a state of inflammation or caseation. There is usually not great urgency in these cases, and so the seat of operation may be properly prepared; and the surgeon can surround the patient with all the safeguards pertaining to aseptic and antiseptic surgery. The pioneer in this field of surgery is Mr. Victor Horsley, who, on June 9th, 1887, undertook the removal of a myxoma from a patient of Dr. Gowers. In this he was successful, and the patient recovered completely. This tumor was intradural, but did not involve the membranes, so that Mr. Horsley was able to stitch up the slit in the dura.

The operation in such cases is greatly simplified if it be found that the tumor is outside the membranes. Although most authors assert that very little is added to the gravity of the operation by operating the dura, my very limited experience does not support this view. If the margins of the membrane can be closely approximated again by fine sutures, so as to protect the cord and favor rapid healing, I can conceive that but slight disturbance may result. But when the membranes are diseased, so that, on removing the affected portions, it is found impossible to bring the margins together, we are under the necessity of leaving the cord denuded of its natural protecting sheath, so that it may be irritated by the pressure of blood clot and other soft tissues, and so that large quantities of cerebro-spinal fluid are certain to drain away. This was the condition in the case already referred to, in which I had the honor to be associated with Dr. Cameron. After the operation in that case, large quantities of cerebro-spinal fluid drained away, and there was accompanying evidence of disturbance of the circulation and nutrition of the brain. The most

* J. Jackson Clarke. *British Medical Journal*, Nov. 21st, 1891, p. 1028.

marked symptoms in that case were weak, thready, and irregular pulse, rapid and suspicious breathing, and delirium with excitement. The temperature, however, never rose above 100° F., and, at the time of death, which occurred on the fourth day, the wound was fairly healed, except in the position of the drainage tubes. Although we frequently read of cases in which there has been an escape of large quantities of cerebro-spinal fluid without ill result, I confess that I am unable to bring myself to believe that such markedly changed conditions of intracranial pressure as such considerable losses must entail can be altogether unaccompanied by corresponding changes in nutrition, and so in the exercise of function of the brain cells. The case above cited, together with a case of drainage in hydrocephalus recently under my care, in which similar symptoms were observed, leads me to believe that the fatal characters of the cases are due to disturbance, especially of the respiratory and cardiac centres, in the medulla.

That such losses of fluid do not always occur when the dura is opened, and that such losses, when they do occur, are not by any means always fatal, is abundantly attested by numerous cases ending in recovery; so that the additional risk entailed by opening the dura forms no valid argument against the operation. I would, accordingly, repeat my conviction that operation should be performed in all cases in which the paraplegia could be determined to depend upon the pressure of a benign tumor; but I would urge the importance of leaving the membranes intact, if possible, of coapting them accurately by sutures, if they have been opened, and of endeavoring to get union of the whole wound by first intention without the use of any drainage tube.

COCAINE IN SURGERY.

BY L. M. SWEETNAM, M.B.,

Lecturer on Therapeutics in the Woman's Medical College; Surgeon to the Outdoor Clinic, Toronto General Hospital; Surgeon to St. Michael's Hospital.

REGARDED by the Peruvians for centuries with superstitious veneration, sacrificed in the time of the Incas to the sun, used by the Mexicans before the arrival of the Spaniards as a substitute for money, few drugs have as remarkable and interesting a history as coca erythroxyton.

It is one of the few drugs in which the surgeon, rather than the physician, is interested.

The alkaloid cocaine was known for years before Koller, in 1884, immortalized himself by demonstrating, before the Ophthalmological Congress in session at Heidelberg, the value of cocaine in operations upon the eye, making the first practical application of the knowledge. For its application to the needs of the general surgeon, we are mainly indebted to Dr. J. L. Corning, of New York.

The enthusiasm with which the drug was at first received soon gave way to a wiser caution, aroused by frequent mishaps following its use, until to-day many good surgeons entertain the extreme view, which would condemn the use of cocaine at all. This, we think, should be deprecated, because the drug may be employed with both safety and satisfaction, if the precautions which we shall have occasion to mention be adopted.

In defending the employment of the drug, we feel under some obligation to preface that defence with a statement of the risks incurred.

First, we have that unknown quantity, idiosyncrasy, which must account for those rare fatalities, occurring in the practices of the cautious and experienced.

Children under ten years of age, and adults of neurotic temperament, are very intolerant of the drug.

When employed as an application, or injected in the tissues of the head or neck, small doses, comparatively, develop toxic symptoms. The same may be said of its action upon the genito-urinary tract.

In addition, we would suggest that one, or at the most two, per cent. solutions be used when injected, it being safer to inject two drams of a one per cent. solution than half a dram of a four per cent. solution.

While the amount of cocaine used must vary with the extent of surface to be anesthetized, the aggregate ought not to exceed one and three-quarter grains; if about the face, not more than one-third of a grain.

In injecting, the intradermic, rather than the hypodermic, method is to be chosen, the risk of injecting the cocaine directly into a vessel being in this way much lessened.

Organic disease of the heart and serious disease of the lungs are contraindications.

During injection, the patient should be in the recumbent position. In operations upon the throat or nose, the head should not be raised until complete anesthesia has been secured.

The solutions must be free from organisms.

If, despite the employment of these precautions, toxic symptoms develop, we may comfort ourselves with the thought that cocaine, like strychnia and belladonna, hangs her danger signals well up, and far out, usually giving distinct warning long before any serious danger is reached.

Remembering, then, that death under cocaine results from depression of the cardiac and respiratory centres, place the patient in the recumbent position, perfectly horizontal. Stimulate the branches of the fifth by slapping the face with a towel wet with cold water.

Practise artificial respiration.

In the presence of great pallor, administer amyl nitrite by inhalation.

If these means fail, and deglutition is impossible, inject (hypodermically) caffein and sulphuric ether.

Tetanization is met by chloroform inhalation.

Aim at moderating the reflex excitability of the nervous system.

Sustain the heart and re-establish the equilibrium of the blood pressure.

The treatment of acute cocaine intoxication is, above all, a case for arterial medication.

I have had good results from morphine hypodermically administered. This should only be given at the very outset, and only in sufficient quantity to secure the physiological effects.

Those who are distinctly nervous and apprehensive are protected by the administration of one-drop doses of the liq. trini trini, administered at intervals of ten minutes, until the physiological effect of the drug is secured. The nitro-glycerine acts almost as promptly as the amyl, and for a much longer time.

A few words with reference to the solution. This should be free from bacteria and pathogenic organisms.

Few alkaloidal solutions show the same tendency to develop bacteria; a solution, therefore, that is to be kept must contain some anti-bacterian.

Chloroform acts well, but is objectionable where the solution is to be

used in the eye. Pilcher dissolves the cocaine in a mixture of equal parts of sterilized water and saturated solution of salicylic acid. This amount of the acid is sufficiently protective without being objectionable. Carbolic acid, one in thirty, preserves the solution, increases the anesthetic action, and lessens the risk of intoxication.

Resorcin, too, enhances the anesthetic value of the cocaine, and lessens the risk of unpleasant symptoms. The resorcin combination is particularly valuable in using the stronger solutions for nasal work.

We sometimes hear the statement: "In all cases of plastic surgery where cocaine has been used, it has operated against immediate union, upon which the success of the operation so often depended." In the great majority of cases this difficulty may be overcome by using a thoroughly sterilized one or two per cent. solution, and by using a constrictor without the Esmarch bandage.

A one per cent. solution injected into tissue deprived of its blood and serum by means of the rubber bandage is equal in its local action to a three per cent. solution in tissues not rendered anemic in this way.

Another objection to the use of the Esmarch bandage, in addition to its interference with primary healing, is that after the removal of the constrictor we are apt to have a general oozing, the bleeding in some cases so free and continuous as to render the term "bloodless operation" quite *malapropos*.

The following is the technique of operations upon the extremities, where the circulation may be temporarily arrested, and as suggested by Wyeth: In operating upon a finger after injury or destructive osteitis, the hand is cleansed by immersion in a 1 in 2000 sublimate solution for half an hour. The anesthetic may be employed in two ways, viz., directly injected into the lines of incision, or indirectly injected above the nerve at the base of the finger.

Cocaine, directly injected, retards, to a slight degree, union and repair. It is, therefore, better to employ, when possible, the indirect method, although this requires a little longer time to secure the anesthesia, and usually more of the cocaine solution.

The syringe, including the needle, should be surgically clean, the latter of the smallest size, the quantity of cocaine measured accurately, and the screw, now adjusted to all the better syringes, screwed down to prevent the accidental injection of too large an amount.

For this method it is best not to Esmarch the finger, but to use constriction by means of a piece of rubber tubing around the digit, or its junction with the hand. Just before applying the rubber, every particle of air being forced out of the syringe, the point of the needle is thrust through the skin on the lateral aspect of the dorsum of the finger, about an inch from and on the distal side of the ligature.

About two minims of the solution are injected, the needle pushed about one-fourth of an inch further, two minims more forced out, and so on, until the point rests just beneath the skin upon the palmar aspect of the digit, when a large quantity is injected. In this way one-half of the finger is injected, and this operation is immediately repeated upon the other half, the entire procedure not occupying more than thirty seconds. The tourniquet is at once tightened, and the cocaine solution is thus held at a standstill for absorption.

The process may be hastened by massage over the injected area. In about two minutes insensibility should supervene. Should the anesthesia not be satisfactory, the injection may be repeated. I have usually found fifteen minims to be sufficient, but thirty may thus be employed without risk. The operation finished, the most important part of the technique presents itself, viz., the elimination of the cocaine.

If the constriction were suddenly and finally removed, the excess of solution would be swept at once into the circulation, and would endanger the comfort, and, perhaps, the life, of the patient. It should, therefore, be let in in small quantities. Loosening the band for a minute, the circulation is restored, and, under sublimate solution, the wound bleeds freely, thus giving escape to whatever of the solution the arterioles have absorbed. A certain proportion is carried into the general circulation. The rubber is again tightened for two or three minutes, and during this time the sutures are inserted, and the dressing applied. Alternate loosening and tightening the tourniquet, and the small quantity of the solution is admitted toward the heart and nerve centres, which are thus gradually accustomed to its presence, whereas they might have been overwhelmed if the entire excess had been at once swept into the circulation. In the direct method the solution is thrown exactly into the proposed line of incision.

The advantages are : (1) The rapidity of the anesthesia (practically instantaneous) ; (2) the small quantity of cocaine applied ; (3) the escape of a good part of the solution injected.

I prefer this procedure in incising felons, removing ingrowing or diseased nails, foreign bodies, etc.

In case of incisions going deeply, as in the extirpation of tumors, it is advisable to penetrate into the deeper tissues, and surround them with a weak cocaine atmosphere. To obtain anesthesia in stretching the sphincter ani, place a tampon saturated with cocaine solution in the rectum, and, puncturing close to the mucous membrane, deep enough to be sure that the upper fibres will be reached, inject in six different places.

In genito-urinary surgery cocaine has been extremely useful ; strictures, regardless of their location, may be divided without pain, two drams of a two per cent. solution being injected with the ordinary

urethral syringe. In searching for stone, catheterization cystoscopy, it has been of great value to both patient and operator. In circumcision in the adult, it answers perfectly. A rubber tube constricts the penis at the pubes; the parts having been cleansed, the prepuce is put on the stretch, and the needle passed in at the free border in the middle line. The point of the needle is passed back as far as the line of incision. From this one insertion of the needle, by withdrawing the needle slightly and passing the point forward to a different point in the line of the proposed incision, the incision can be made, absolutely without pain. The frenum usually requires a little special attention.

Tenotomy for wryneck and other deformities, operations for inflamed bursæ tapping, operations for small hemorrhoids, single and superficial fistulæ, fissure, and ulceration of anus and rectum are satisfactorily performed.

Among the larger operations reported as done under cocaine are amputation through the thigh, one per cent. solution being used in the skin, and a one-half per cent. solution in the deeper parts; only while the bone was being severed did the patient complain of pain.

T. H. Manley removed the entire breast for epithelioma painlessly with the aid of cocaine. The same writer says, in his work on hernia: "Cocaine is of priceless value in operations for strangulation." "In strangulated hernia, its use should wholly supplant pulmonary anesthetics."

"There are, many times, patients who require abdominal section, yet who are in such physical condition as to almost absolutely prohibit the administration of chloroform or ether, yet the operation may be done without hesitation under cocaine."

"Besides the fact that the primary depressant effect of the general anesthetic was avoided by the use of cocaine, there are two other points of much importance in this case—the absence of the vomiting that nearly always follows chloroform or ether, and the absence of shock—the last particularly important where one is called upon to operate for stab, gunshot, or other abdominal injury."

Dr. Lanphear, speaking of his experience with cocaine anesthetics in abdominal section, says:

"A typical operation, such as the removal of enlarged glands, operations for varicocele, external urethrotomy, cystotomy, hernia, other than strangulated, ought to be considered beyond the domain of cocaine surgery."

The effect of cocaine upon the eye is too well known to warrant any extended remarks here; but I will venture a brief reminder that cocaine powerfully influences the corneal nutrition, sometimes causing wrinkling and drying of its epithelium, and this in direct proportion to its strength, and that the corneal opacity which occasionally follows cataract extractions

and other operations, sometimes so great as to destroy the effects of the operation upon visual acuity, has been proven to be due to the fact that solutions of corrosive sublimate were used to cleanse the conjunctiva prior to the operation, the cornea having been anesthetized with cocaine.

A single reference to its use in connection with diseases of the ear. In pain from inflammation of the middle ear cocaine not only relieves the pain, but constitutes one of the successful forms of abortive treatment.

In using cocaine in the nares, either for its anesthetic effect, prior to some operative procedure, or to bring about a shrinking of swollen mucous membrane, that the cavities may be successfully examined, it is wise to apply the cocaine solution directly to the enlarged turbinated bones by means of a swab, as spraying of the usual cavities with a strong solution is almost certain to develop toxic symptoms. In bloodless operations, such as sphincter stretching, a smaller amount is tolerated than in an operation where free bleeding would favor the escape of a large amount of the cocaine injected.

From this imperfect retrospect, the important place occupied by cocaine as an anesthetic is apparent ; and we may reasonably expect that as the action of the drug is more generally understood, and the best means of meeting the toxic symptoms appreciated, death from cocaine employed as an anesthetic will become one of the rarest of accidents.

TWO OBSCURE CASES IN ABDOMINAL SURGERY.*

BY WM. OLDRIGHT, M.A., M.D.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital, Toronto.

CASE 1. A. M. W., æt. 23, married, nullipara, consulted me on the 13th September, 1893, bringing a letter from Dr. Christoe, of Flesherton, the following extracts from which letter give a fair history of the case and the conflicting points in diagnosis :

"The patient is one of a family of many children, all healthy. She, several years ago, say five, came under observation with reference to the *catamenia*, and went under treatment, with no good results. A good deal of enlargement of the abdomen existed. She was pale and weak, and continued more or less so for a year or two, when an improvement took place. . . . About a year ago she married—a little less—and soon thereafter she noticed the abdomen enlarging ; two months ago my attention was called to her, and I noticed the enlargement. . . . On Saturday last I again examined her ; found, as I thought, the uterus elongated somewhat, with a much changed *os*, as though the tumor occupied the uterus, and was gradually obliterating the neck, as in pregnancy.

. . . Then, as to its being ovarian, it occupied the central portion of the abdomen, was soft in its nature, and distinct fluctuation was manifested in different positions ; the tumor retained its shape and position, so that ascites was precluded. All these things put together is confusing."

I made an external examination of the abdomen, and found a tumor occupying the position of the gravid uterus, perfectly symmetrical, and extending upwards to the umbilicus. The absence of subjective and all other objective signs of pregnancy agreed with the history in excluding this condition. I directed the patient to secure free evacuation of the bowels by castor oil and enemata, called at her hotel on the following day and examined her more fully. The result of my examination I may sum up in my remark to Dr. Temple when arranging a further consultation with him, that "the tumor feels to me like an infantile uterus implanted on

*A paper read before the Toronto Medical Society.

the posterior surface of an ovarian or par-ovarian cyst, bound down in a central position, but I cannot feel positive."

There was to be felt a pyriform body, in size and position resembling the os and neck of the normal uterus, but its upper border did not merge into the portion of the tumor above with quite the same feeling of a continuous, firm uterine wall. The tumor was tense and elastic, and a portion of it could be felt bulging into the anterior fossa, anterior to, and slightly below, the os uteri. The sound could only be introduced about $1\frac{1}{2}$ inches, the direction being upward and slightly forward. In the subsequent consultation with Dr. Temple, the possibility of retained menses was considered, and it was thought that an explanation of the peculiarities above mentioned in the larger portion of the tumor, and its relations to the small pyriform body, might be found in the thinning and degeneration of the walls of the uterus. It will be remembered that enlargement, with fluctuating dimensions (slight decrease and increase), had existed for five years, and that the patient had never menstruated. Accordingly, it was decided, before resorting to other measures, to anesthetize her, and, under strict aseptic and antiseptic precautions, to dilate and further explore the cervical canal. This was done on her return to the city a few days later; but, after using as much force as we considered justifiable, we failed to liberate any fluid, and determined to resort to abdominal section. As the patient had taken chloroform badly, and was very weak, we decided to postpone the section for a few days, employing the usual antiseptic dressings in the meantime. Distressing and persistent vomiting occurred for a day or two, as the result of the administration of chloroform.

Six days later, the patient was placed under the influence of sulphuric ether, and I made an abdominal section in the median line, being assisted, as in the previous operation, by Drs. J. A. and Chas. Temple and Dr. H. H. Oldright. The peritoneum was much thickened, and, after dividing it, as we supposed, it was found to be adherent to the tumor beneath. I endeavored to pass my fingers down to the neck of the uterus, breaking down the adhesions before them. I succeeded in reaching a point which I ascertained, by bimanual examination, to be about $1\frac{1}{2}$ inches from the outer edge of the neck. Having introduced a catheter into the bladder, I found its upper border was glued by adhesions so high up that I could not extend the abdominal incision, so as to exactly reach the margin of the neck with my finger; but, having got within $1\frac{1}{2}$ inches, and still finding adhesions beyond, I felt that it would be safe to pass a good-sized aspirating needle per vaginam into the pendent portion of the tumor close to the neck; that there would be no danger of escape of fluid into the peritoneal cavity in so doing. The fluid which escaped was of a dirty straw color. I with-

drew enough only of the fluid to enable us to pinch up a portion of the wall of the cyst. This was thin and translucent, and had the appearance of an additional layer of thickened peritoneum. I opened cautiously, and found that the inner surface was that of a serous membrane, and that we had a case of encysted peritonitis. Having emptied the sac, I introduced a small electric lamp, and at the bottom of the cavity could be seen the anterior surface of a uterus about $1\frac{1}{2}$ inches long, and two little ovaries about the size of small white beans. All the other viscera were shut off from the cyst. Hemorrhage having been controlled, and the cavity and interspace which I had formed by separating the two layers of peritoneum having been washed out with a weak bichloride solution, the usual toilet was made, a glass tube being left in the last-named interspace; there being no accumulation of fluid in the tube, this was withdrawn in two hours. The progress to recovery was uneventful, except that it is worthy of note that the patient suffered very little from nausea, in comparison with the persistent vomiting and prostration which followed the chloroform. Although persons are usually much more nauseated by ether than by chloroform, we occasionally find the reverse, and with persons who have so suffered after chloroform it is worth while, on a second occasion, to try ether. I may remind the president of a case of this kind in which he administered chloroform and ether for me in two successive operations on the same patient, the chloroform producing persistent vomiting, and the ether not doing so.

I should have stated that in all other respects, except those indicated, the patient was well developed (mammæ, etc.).

Diagnosis often seems easy when looking back upon it, but it is often so perplexing whilst arriving at it that I thought our difficulties might be of interest and service to some, at least; and I may add that, as an old student, I would be glad to profit by the difficulties and experiences of others. It seems to me a very strange coincidence that the other peculiarities of this case should have been complicated and obscured by an old peritonitis so subacute as not to have come under medical observation or report, and giving adhesions and effusion of such a character as to form a central and symmetrical tumor planted on an infantile uterus. I have met with and diagnosed infantile uterus before, but never with the peculiar combinations above reported.

The patient returned to see me a short time ago, and I find that the bladder is permanently glued, as it was then, to the abdominal wall within three or four inches of the umbilicus. The statement of this fact emphasizes the necessity of careful exploration of the abdominal viscera before performing paracentesis.

There has been no return of effusion, and the patient is in the enjoyment of good health and spirits.

CASE 2. Miss. D., æt. 58, spinster. This patient was under the successive care of Dr. McMahon and Dr. McKenna, at St. Michael's Hospital. She had occasionally vomited bile, was feeble and emaciated. I first saw her in consultation, at the request of Dr. McKenna, ten days before her death. On grasping the abdomen between the ribs and ilium on the right side, the fingers on the posterior abdominal wall, and the thumb shoved well over on the anterior wall, a tumor could be grasped; by carrying the lower abdominal wall well up, then grasping the tumor, and drawing the hand downwards, one could make the tumor slide upwards out of the grip of the hand. Above the tumor, and between it and the bulk of the liver, was a neck, or depression. I think the opinion of those of us who saw her was towards a distended gall bladder and biliary calculi with septic complication. As the symptoms pointed to formation of pus, and during the ensuing week the temperature chart showed the sharp fluctuations characteristic of that condition, an exploratory section was determined upon. On the day of the operation the temperature was 105° F., and the pulse rapid and feeble. Whilst the prognosis was very bad, it was felt that operation presented a possibility of improvement. It was done with the assistance of Drs. Nevitt, E. E. King, McKenna, and McKeown, Dr. Garratt administering the anesthetic. The section was made in the long axis of the gall bladder. This was opened at its fundus, and five medium-sized calculi and a dozen or more small ones were removed. Some of them I have with me. One calculus was impacted in the cystic duct. I broke it up, and passed the pieces on into the duodenum, following them by a probe with an extra large head to test the sufficient patency of the duct. This being satisfactory, and the bladder and ducts being searched in vain for any septic condition, the gall bladder was closed by Lembert sutures. Drs. Nevitt and King, as well as myself, passed our fingers over both surfaces of the liver, and in all directions in the vicinity, and could not find the pus. The patient died about twenty-four hours after the operation.

At the *post-mortem* examination made by Dr. Dwyer, three abscesses were found in the substance of the liver, high up in the right lobe, towards the upper, posterior portion of it.

I may add that, among the surmises before operation, Drs. Dwyer and McKeown suggested the possible co-existence of a floating kidney; and this co-existence was verified during the operation.

A CONFUSED CASE OF ETHICS.

BY EZRA H. STAFFORD, M.B.

TORONTO.

THE history of Christian Science has been short, but it has been remarkable. Goldwin Smith had, for the moment, lost this movement from mind when he wrote: "It is in Quebec alone, on the western continent, that miracles are still performed. The shrine of Ste. Anne de Beaupré is thronged with pilgrims, and thickly hung with votive offerings, though her cures are confined to ailments of a certain class, chiefly nervous, and she has not restored a limb, or healed anybody of cancer."

The Christian Science doctors (C.S.D. is what they sign to their names) perform similar miracles, in cases of similar disease, by working upon the mind in a similar manner. Their methods are about the same as the saint's, but are adapted to a less grossly superstitious people than the French-Canadians. The principles of both are identical, and, in cases of semi-imaginary disease, or of those arising from a morbid state of the nervous system, or a mind disordered by idleness and the unwise reading of popular medical literature, there is no doubt but that the "laying on of hands" and "anointing with oil," and all the other stage effects of Christian Science, will prove efficacious to a marked degree.

Nor is this a narrow province either, but a field of disease so large that an independent school of healing might certainly find plenty of scope for their professional efforts in it alone, without going into other matters—to such a remarkable extent does medieval tradition still obtain in the popular mind. Unfortunately, however, they do not confine themselves to this specialty, nor even to medicine as a whole, but, banding themselves together into a religious sect, try to live up to certain vague rules, deduced from phrases which occur in the New Testament.

The great risk run by the patient who calls in a group of these transcendentalists to treat a case, where the chief desideratum is an ordinary knowledge of anatomy and a little of the common sense of antiseptic surgery, will, perhaps, be best shown in an account of a special case which came lately under the writer's notice; and the corollary drawn from a study of such a case will point, I think, to the exclusion of Christian Science from the treatment of distempers, where their particular methods will plainly be of no avail.

The case I refer to was one of obstetrics, and a burly nurse, accustomed to the wholesome routine of the physicians of the old school, was engaged for the patient at the time of her lying-in, no attention having been paid to the doctrines which were entertained by this estimable, strong-minded woman—an oversight afterwards probably regretted, for she proved a disturbing element in the subsequent plan of treatment adopted by the Christian Scientists, into whose line of thinking the patient, and, after her, her husband, had been only recently drawn.

With regard to parturition, there is an idea held by those who practise Christian Science that it is, when normal, a phenomenon unaccompanied by pain. The abnormal conditions which they generally endeavor to counteract are not physiological, but psychological ones. Practitioner and patient accomplish this end, jointly, by mentally asserting, with endless iteration, that there is no pain—or that there is no this, or that, or whatever manifests itself in the focus of the patient's field of sensation. Upon the hypothesis that subjective sensation is itself abnormal, when it is of a sort repugnant to the mind of the patient they endeavor, by magnetism and hard thinking, to expel all such sensations from the mind. When this treatment is successful, labor is painless.

In this particular case the Christian Scientists (some three or four in number, male and female, for they do not work singly) were doing very creditably, and had reached a laudable state of absolute certainty that the patient was quite free, as yet, from that absurd superstition, known in the earlier annals of moral evolution as pain.

The patient unluckily met with a lesser degree of success, and, though she admitted to herself that the bearing-down pains were only an illusion, she found it such an illusion as caused her to groan audibly.

Knowing nothing of such superfluous details as pelvic anatomy, or the physiology of labor, the medical attendants had probably never heard of breech presentation either. A rather facile way of getting over certain facts is to refuse to admit that they exist, and in this rhetorical accomplishment the school in question is pre-eminent.

The nurse did not, however, regard the appearance of a foot in the vulva from the illusory standpoint, and, after some hours, perceiving that the child would probably be stillborn, she became insubordinate, and broke in upon the council of laborious pensiveness for the third time, with the demand that something practical be done. Some further remarks of a personal nature, touching a "dry birth" which she had herself experienced early in life, and with which painful reminiscence she was wont to encourage those of her patients who became discouraged with their own trouble; indeed, all of them, whether they became discouraged or not, were, however, interrupted with curt inappreciation by her present listeners,

who cautioned her to remain calm, adding that if anything did go amiss she would certainly be to blame, owing to her disquieting influence, which served to agitate the undisciplined patient, who, they grieved to find, was prone to lay too much stress upon mere subjective shadows.

Enraged beyond expression at this, the honest nurse, continuing in her insubordination, sent out secretly, upon her own responsibility, and called in the nearest regular physician for revenge.

The cervix, being well dilated by the time I arrived, I had no very great difficulty in facilitating a delivery by forceps, the child being still-born from long pressure upon the cord, and hydrocephalic to a considerable degree.

The nurse, who ushered me into the house, had said nothing to me about the condition of things, and I could scarcely understand at the time the noises of a frightful dispute which was going on in the next room, where the highly-incensed Christian Scientists, having awakened the husband from sleep, were pushing him about from hand to hand, in an endeavor to work him up to the point of entering the lying-in chamber, where I was, and forcibly driving me out of the house.

At this time a faint smell of carbolic acid reached their nostrils, and intoxicated them with anger at the thought of such heinous pollution. One spying in at the door also saw me administer some morphine hypodermically, and this further profanation still more heated the feeling against me.

But at this juncture the nurse, who had her natural enemies now somewhat at a disadvantage, picked up the sad cause of all the trouble, and going out among them with it limply in her hands, like a fetish, or a protest against them, produced a dampening effect upon them, which, perhaps, would not have been so marked had the child been born normal.

Observing these things, the blinking parent asked a few words with me; but, being much bewildered, both for lack of sleep and also from the violent concussion of innumerable words upon the yielding material of his brain, he faltered incoherently, and would speak of nothing but of a "V," about which he had a good deal to say.

Naturally thinking that he was dwelling with pathetic promptness upon the question of remuneration, I corrected the "V" idea, with a delicate "X" impression, bordering on vagueness. I was soon to learn, however, that, being a driver upon a regular route, going twice a day in a certain direction, and returning home at another angle, he really meant his delivery trip by the "V," and that he was asking my advice as to whether he should not informally inter the deceased, without the expense of the usual rites, and clandestinely, as it were, at the remote angle, which was in an unfrequented place. I corrected, as far as I could, so crude an idea of the sanctity of legal burial.

But when I was filling out the death certificate, and came to "Religious Denomination," he, being hard pressed, with the nurse and I upon one side, to whom he lacked strength to acknowledge himself a Christian Scientist, and with they themselves upon the other side, whom he did not dare to affront by calling himself anything else, he very adroitly answered, "Formerly Methodist."

This was an inspiration, but when the nurse, who appeared to be laboring under high pressure, observed this weakness upon his part, she made use of some very penetrating generalities, which displayed a genius (seldom possessed except by women) for that species of invective for which there is no answer. She was accordingly dismissed, with hysterical resentment, on the spot, and retired with a dignity even more impressive than that of the gentleman of the black rod who stands at the door of the House of Commons at Ottawa.

But, to cut short what proved at the time a rather amusing digression, I need not even hint at the utter helplessness of anything but scientific obstetrics in any case where complications arise.

Having observed how loath my colleagues were to use manipulation, I was next to learn, during the patient's puerperal state, that they had as decided objections to medication, deeming the theory of antiseptic treatment as a mere figment of the imagination; for, having given the usual orders, I ascertained, on the third day, when I observed a marked rise of temperature, that these directions had been either countermanded or wilfully neglected.

It was only by attending to these details with my own hands that I was successful in overcoming the alarming symptoms. Prayer, or some weird incantation of cognate significance, was resorted to by the Scientists at the same time, and, of course, the reduction of temperature which ensued was attributed to prayer, just as the rise of temperature had previously, with equal convenience, been attributed to my original use of ergot and the hypodermic injection.

The question remains, What is a conscientious practitioner to do in such an emergency—with a wish to abandon the case—unless the charlatans are dismissed, on one hand, and a feeling of humanity, and a religious belief in carbolic acid, on the other?

Their creed being to copy Christ until His recorded facility in healing is reached, the absurdity of their professional pretensions cannot well be assailed without risking the appearance of blasphemy, which would not be popular. In the meantime, so plausible is all their meaningless twaddle, tagged, as it is, with apt biblical catches, that the whole theory proves irresistible to the ignorant and to the hysterical.

ACUTE INFLAMMATION OF THE MIDDLE EAR FOLLOWING INFLUENZA.*

BY DR. BUTLER,

LONDON.

ACUTE inflammation of the middle ear, following influenza, is, to some extent, similar to the same complaint due to other causes; but in some respects it is different.

(1) The onset is more abrupt and violent.

(2) An exudate is poured out more rapidly, and is greater in amount. This exudate, although serous at first, has a greater tendency to become purulent in character.

Scientific observers state that influenza depends upon the presence of a particular micro-organism, and that it has been isolated from the purulent discharge from the middle ear.

This germ is a pus-producer, and the mucous membranes, especially those of the nose, naso-pharynx, and bronchi, often bear the brunt. The roadway from the pharynx to the middle ear is both short and direct, and the lining membrane of the middle ear is a fertile soil for the germ. The left ear is most likely to be affected when the trouble is unilateral, but this holds good in acute cases from other causes. In the influenza cases I think the pain and constitutional disturbance are apt to be more marked, and, probably, perforation of the drumhead is more likely to occur, and also to arise earlier in the process.

Symptoms. It is not necessary to say much about the symptoms. A feeling of fullness in the ear is experienced in the mild cases, with almost intolerable pain in the severe ones, particularly where there is a pus formation, and where the mastoid cells are seriously implicated. The pain is not confined to the ear, but radiates over the side and back of the head, down the neck, and to the teeth, and is sometimes so severe as to prevent sleep, or may induce delirium, especially in the case of children.

The temperature is usually elevated, often to 101° or 102° , or even higher.

* Read before the London Medical Society.

Tinnitus. As there is almost invariably a catarrh of the nasal and naso-pharyngeal mucous membranes, with a profuse secretion, and more or less obstruction in the Eustachian tube, the tinnitus in the congestive stage is likely due to retraction of the drumhead.

Disturbed hearing. This varies, but is not so great in the congestive stage as it is later, when there is an exudate filling the middle ear.

Upon examination with speculum and reflected light, the appearance varies according to the stage of the trouble. The tympanic membrane is red and congested-looking in the early stage, but later on has a gray and sodden appearance, and, if there is much fluid in the tympanum, will bulge outwards. The greater number of cases treated by me have been seen for the first time after perforation had already taken place. Very often the sodden, ashy-looking, and macerated condition of the parts may reasonably be attributed to the almost endless liquid applications to both the outside and inside of the ear. The ear is a very tempting and convenient hole to fill; so, as a rule, it is filled accordingly.

Treatment. If seen early, we should endeavor to prevent perforation of the tympanic membrane if possible; and this will fall to the lot of the general practitioner oftenest. I believe that this is possible in a vast majority of cases if the treatment instituted be proper and prompt.

Where perforation occurs we can never be certain that it will heal readily, or, in fact, will ever be healed.

The patient should be kept quiet, and, in severe cases, put to bed.

Open the bowels; possibly calomel is as suitable as anything. If there is much elevation of temperature, frequent doses of aconite. Politzer states that where there is much secretion in the naso-pharynx drop doses of tr. pulsatilla, alternating with the aconite, is very useful. I have had no experience with the latter.

Local treatment. I believe that during the congestive stage in the majority of cases the local abstraction of blood by the application of leeches, or, better still, the scarificator and cupping glass, is the very best treatment. These should be applied in front of the tragus, or should there be evidence of severe mastoid affection, as tenderness, swelling, etc., over this region, they should be applied in this locality.

Many of these patients are anemic, so that there may be some difference of opinion as to the efficacy of blood-letting in this manner.

Avoid poultices and blisters behind the ear. Counter-irritation may be good treatment later on, to assist in clearing up a lingering exudation; but I saw one case in which I believe that periostitis over the mastoid, with a fistulous opening externally, was caused by blistering.

Pain. This is what the patient and his friends are most concerned about, and if we cannot succeed in giving relief they will make it

painful for the doctor. In the milder cases the local application of heat to the ear, by means of a bunch of hot cotton, hot bags of salt, or bran will suffice. The middle ear should be rather gently inflated by the Politzer bag. Probably when only the ear is affected, the use of the Eustachian catheter is preferable; but as there is an irritable and inflamed condition of the nasal passages and naso-pharynx, the introduction of the catheter may be disagreeable to the patient. A cocaine spray will relieve this temporarily. In cases where the pain is very intense, it will be necessary to douche the auditory canal with hot water containing boric acid. Phenacetine, or acetanilide, will be useful internally, and in some cases morphia will be indicated. Alkaline sprays to the nasal and pharyngeal membranes are useful in all cases. Avoid quinine. Where the mastoid region is shown to be seriously implicated, some recommend the application of cold in the early stages, while the auditory canal is douched with hot water.

A four-grain solution of atropine, instilled into the auditory canal, is very useful in allaying the pain. A 4 per cent. solution of cocaine is recommended, but I have not found it to be of so much service as atropine.

If, in spite of treatment as already indicated, the exudate is not successfully worked off into the pharynx, through the Eustachian tube, and perforation of the drumhead is imminent, it is better to anticipate it, and make an opening with the knife, or it may be necessary to enlarge a spontaneous rupture, in order to secure proper drainage.

Then gentle inflation should still be kept up, with warm douches, if the discharge be profuse. As the discharge lessens and the pain subsides, the instillation of a simple boric lotion, with an occasional cleansing with warm water, should be substituted for the regular application of the hot douche. Gentle and soothing treatment is the key to the position.

Astringent applications may be required. When the discharge is slight, and, if perforation large, the dry treatment is better. After the perforation has healed, the middle ear should be inflated a few times.

It is important that the general health should be looked after, and many of these patients require tonics for some time. If these cases are seen early, and treatment be both prompt and proper, such disastrous results as mastoid trouble, requiring operative interference, will be rare.

Selected Articles.

THE PROGRESS OF GYNECOLOGICAL SCIENCE IN ENGLAND.

ADDRESS BY MR. ERNEST HART.

I HIGHLY appreciate the honor and greatly value the courtesy which your society has extended to me. Although I have absolutely no personal gynecological experience, still I thought possibly some few recollections of the progress of gynecological science in England, with especial reference to the individuals who practise it and the influence on its progress of some of your great American gynecologists, some of whom, from time to time, have not only visited, but have settled in Europe, might be interesting.

I could not but remember, when I got your kind invitation, sir, that I have never, since I became a student of medicine, now exactly forty years ago, studied obstetric medicine, and as I entered surgery as a pure surgeon I have never felt called upon to study it. Such was the state of medical examinations in England that I was never examined in gynecology in any of its branches. The College of Surgeons of England at that day, presided over, as it was, by some of the greatest surgeons of the day—by Lawrence, by Brodie—thought so little of gynecology and obstetrics that it was not thought a necessary part of a surgeon's education. I not only had never delivered a woman, but had never seen an accouchement. That of itself indicates the immense progress which has been made within the course of a comparatively short lifetime. I suppose there is no college in the civilized world now that would think it possible to graduate any man without requiring him to have a knowledge of obstetrics and gynecology.

As I was thinking the matter over this morning, I recalled some interesting facts that have great bearing not only on gynecology, but on the practice of the surgeon. The school I entered was attached to St. George's Hospital, and the head of that school was Samuel Lane, who founded it. He was the first British surgeon to perform ovariectomy. He performed it on a relative, and under peculiar circumstances; that is to

say, at that time to perform an ovariectomy was as much as any man's reputation was worth, and only a very bold, a very daring, and a very conscientious surgeon would have dared to do it. Attached to the same hospital was a lecturer on obstetrics who has a great name in medicine—Robert Lee. He is known throughout the civilized world for his invaluable researches on the nerves of the uterus, and his is one of the greatest names in obstetric anatomy and surgery. Robert Lee was violently opposed to performing ovariectomy. Another surgeon had arisen since Lane's operation. Of course I do not forget that the first ovariectomy was performed by an American practitioner. But about the time Lane performed his first ovariectomy another gentleman began to practise ovariectomy pretty extensively and with extraordinary success, and he was remembered as the real founder of ovariectomy as a surgical procedure. That was Baker Brown, who, with Lane, founded what is known as the 'St. Mary's Hospital of London. Although Baker Brown performed many ovariectomies with success, so great was the hostility to the operation that I have heard Robert Lee more than once declare publicly that any surgeon who performed ovariectomy with fatal results to the patient, which he thought would inevitably follow, should be accounted an offender against the laws of his country, and that he would, if possible, have an inquest upon every case and endeavor to secure the punishment of the surgeon who performed the operation. That shows the remarkable change of opinion which has occurred in my lifetime. There are other interesting lessons which gynecologists ought also to take to heart. At the time Baker Brown signaled himself for his extraordinary daring, courage, and skill, so that he not only established this operation in his own country, but for the whole world, Nélaton, the great French surgeon, came over to England to learn ovariectomy from Baker Brown; for up to that date the operation had proved so fatal in Paris that not even Nélaton dared to perform it there. But at that time all French surgery was fatal, and even murderous, because it was unclean. This was explained by Virchow, in the Academy of Medicine, by declaring that there was something in French flesh which prevented ovariectomy from succeeding. Nélaton, however, who was very English in his sympathies, was led to think that probably there was something in the air of Paris which prevented its success, and the first ovariectomy Nélaton did after seeing Baker Brown operate was performed in a house outside of Paris that he took for the purpose.

Baker Brown, then, deserves to be remembered always as the real founder of ovariectomy. His is a very instructive case, because he was charged with reporting from time to time his favorable cases, but not reporting fully his unfavorable cases; at any rate, his reports came to be very much doubted. His career closed, as we know, under the most

painful cloud, and it is very doubtful whether that operation would ever have been established in England but that a surgeon of high character, great integrity, and extraordinary candor took up the operation, admitted all of its defects, published all of his difficulties, reported all of his failures, and by his transparent honesty, candor, and courage, not less, and perhaps even more, than by his great operative skill, established ovariectomy on a basis which has never since been shaken, and which is now universal throughout the world. I mean Spencer Wells. Spencer Wells and Keith, the two great English ovariectomists, have distinguished themselves by this, that they have invariably reported every one of their difficulties, every one of their failures, and that no one ever suspects them of any exaggeration or omission. And I want to emphasize, in passing, the extreme importance of that for all gynecological procedures.

I have also seen other interesting phases which might easily escape the memory, but one remembers the amount of progress of gynecology and the remarkable way in which it has influenced favorably the whole progress of surgery. I remember, when I began the study of medicine, Henry Bennett, who died only two years since, came fresh from the Paris schools and brought over the speculum, which had first been introduced at the Hôpital Saint-Lazar. And the same opposition was raised to the use of the speculum. It was denounced as an instrument unfit for use with modest and respectable women, and only suitable for that class of women who were found at the Hôpital Saint-Lazar. It was called a foul instrument, which no decent Englishman would permit himself to use, and to which no decent woman ought to subject herself. There, again, courage and character triumphed, and, by a rather interesting concordance of circumstances, it happened that they were accidentally placed in a position in which they could make a great impression. Henry Bennett, Tyler Smith, and Robert Barnes were all three in succession sub-editors on the staff of a great paper, and therefore they were able to carry on a very violent contest with great advantage; and the introduction of the speculum from that date has spread with great rapidity, and you know better than I can tell you how vital and of what primary importance it is in all of your procedures.

Then I remember when a great American gynecologist made his appearance in my country, and I had the happiness of offering him hospitality for several months. That was Marion Sims, who had to leave New York on account of his Southern proclivities, and he thought it well to go over to Europe until matters were settled. Marion Sims introduced new methods and a new and vastly improved form of speculum, a new method of dealing with vesico-vaginal fistula, and the wire suture,

the precursor of the antiseptic method. And again I recognize in Marion Sims a peculiar path-breaking obstetrician and gynecologist, who created a new path for himself and all who came after him, which has never been closed, and never can be. And why? Not because his skill was so great, but because every method Marion Sims introduced was characterized by the pure honesty of the man. He found that the operation for vesico-vaginal fistula had not succeeded because men had been fooling in the dark; they had not had the courage to bring the parts quite down to the light, and had never had the candor to acknowledge that they had not completed their operations thoroughly. His method was one which, when once known, any child might have invented. These are all historic men and instances, and I do not believe have ever been mentioned before. I remember when Sims went over to Paris. The great operator there on vesico-vaginal fistula was Elembro. Sims did not speak French, and Elembro did not speak English, so it was a matter of sight. Sims said: "I can't talk to him." I said: "No matter; get some one to ask him to show you his cured cases." He hunted for six weeks, but could not find one cured case. He was a great man. He described his method, did his operations, and I have no doubt made a certain number of cures, but he did not describe fully all the difficulties, the repetitions, the little failures; and there was where Sims made his immense success and broke a fresh path for gynecologists, and that, I think, will always remain to the honor of American gynecology.

Then I remember Sims making in my journal a suggestion which at that time seemed preposterous, but such has been the influence of gynecologists that laparotomists now do a hundred things which twenty years ago would have been thought criminal. But it was Marion Sims who first, in the *British Medical Journal*, suggested and described cystotomy for gallstones, which he did, and for the first time. The second suggestion was an operation which he had not done, but described and recommended: it was incision of the abdominal walls and searching out the intestines for gunshot wounds. I remember talking about this to a great surgeon, who said it was fantasy, a wild imagining. But that operation is now done throughout the world, and is one a great Chicago surgeon has done much to improve and complete.

Finally, I would mention another thing which the gynecologist has done for us in Great Britain. He has broken down the absurd barrier which existed until very lately, and in the minds of conservative physicians still exists, and which divides the practice of medicine from the practice of surgery. Any Fellow of the College of Physicians of London who would soil his hands with the knife would have committed a most serious offence against the dignity of the profession; the knife was for

the surgeon, and medicine for the physician. But the gynecologists rebelled, and Tyler Smith and Robert Barnes, both Fellows of the College of Physicians, insisted that, being obstetrical physicians, they had a right to practise the full range of gynecology, and they claimed and have won for physicians throughout England the use of the knife. American gynecologists and laparotomists have for many years taken the most advanced position in the ranks of the surgeons and physicians of the world, and we shall always look with the greatest interest on everything that comes from this side; but still there remains the suspicion that men are too much disposed to describe the most favorable results of their operations, and do not enter into the public confessional sufficiently in respect to their failures and difficulties. This does not by any means apply only to the gynecologists of America, but certainly this suspicion exists in my own country and elsewhere.

I mention these things to show how much has been achieved by American and British gynecologists in surgery, and the enormous force of candor as well as capacity and of courage in self-confession as well as of courage in operating.—*American Journal of Obstetrics*.

IODIDE OF LIME IN CROUP.

BY V. E. LAWRENCE, M.D.,

HALSTEAD, KANSAS.

FOR many years I have been a careful reader of the medical journals, and have obtained from them so many valuable suggestions, and have derived so much information from them not to be found in even the most voluminous text-books, that I feel indebted to them; so that whenever I come into possession of medical knowledge which is valuable to the medical practitioner, I regard it my duty to give the information through the medical journals.

Some months ago, through an article written by Dr. A. G. Beebe, of Chicago, on the use of iodide of lime in membranous croup, I became aware of the fact that probably in this drug had been discovered what I had for ten years sought, namely, a remedy which could be relied upon in the treatment of this most dreadful enemy of childhood.

I asked my wholesale house to send to me one ounce of the remedy, and received in return a white or yellowish salt, marked iodide of calcium, As the U.S. Dispensatory makes no distinction between the iodide of calcium and the iodide of lime, I put the drug aside, thinking I had the article referred to by Dr. Beebe.

Soon after, a boy, eighteen months old, showing all the symptoms of membranous croup, fell into my hands. I prescribed the remedy, and after a hard fight for four or five nights he recovered. But his breathing was noisy and labored, and it was necessary to call to my assistance the steam bath, and to administer every three hours five-drop doses of the fluid extract of quebracho, a drug which possesses the unique power of enabling the red corpuscles to assimilate a larger quantity of oxygen from the same amount of air. By its use the dusky hue of the skin was changed to a more ruddy color, and the heart also strengthened. This is a most valuable remedy in all respiratory diseases, and is worthy of a larger recognition than it now enjoys.

I then wrote Dr. Beebe for additional information regarding his remedy, and, in reply, he informed me that he used a dark-colored drug called the

iodide of lime, and not the white or yellowish salt called iodide of calcium. He also gave me the address of the manufacturers, a well-known firm in Boston, Mass., to whom I immediately sent fifty cents, and received by mail one ounce of the iodide of lime, with instructions to protect it from the light.

I have used the drug in two cases since. In both an easy and speedy recovery took place, and without the hard fight had on the first case, in which the iodide of calcium was used.

Dr. Beebe advised that ten grains be dissolved in four ounces of water, and that one or two teaspoonfuls be given every fifteen, thirty, to sixty minutes, according to the severity of the symptoms, until the dry, croupy cough merges into the moist cough, and until all danger of its return at night has passed, when some other suitable remedy may be used. Dr. Beebe writes that he has used the remedy for twenty years in a pretty large city practice without the loss of a single patient, and he has come to look upon the disease as one to smile at, but not to be afraid of. I used the drug as suggested by Dr. Beebe, with the above happy and unusual results.

Some time ago I wrote an article regarding the remedy, and since its publication have received so many letters from physicians over all the United States, asking where the drug can be had, that I have concluded to reproduce the article, in the hope that it may be the means of removing from the homes of the people the terrible anguish experienced in seeing their little ones going down to the grave in the embrace of this unrelenting enemy of childhood.—*Brooklyn Medical Journal*.

Clinical Notes.

RUPTURE OF THE HEART.*

By F. P. DRAKE, M.D.,
LONDON.

I WISH, this evening, to give you a few notes on a case that presents to me considerable interest, and, while it may not be of much practical value to any one, it will, I think, at least serve to demonstrate a few exceptional points as to the exact diagnosis of all forms of heart lesions, and may serve to put us on our guard when asked to give a decided opinion upon this particular organ.

This patient, aged thirty-five years, had a good family history, free from any local or constitutional disease, either hereditary or acquired, of exceptionally fine physique, 5 feet 11 inches in height, and weighed, on an average, 185 pounds; never had any severe illness or injury of any description, and had always given a great amount of time to physical training, and was exceptionally fond of outdoor exercises and sports.

On the 10th day of August last he was playing in a game of cricket at Toronto, feeling in the best of health. The day being warm, and he having to do a great amount of running between wickets—being in when over 100 runs were being made, and some of these forced runs—when, after one of the latter, he complained, as he said, “of a slight pain in his chest,” which proved of only short duration. He finished his game, felt well afterwards, and rested well that night. On the following day, while playing in another match, bowling most effectually and hard, the ground being wet from the morning’s rain, he again felt a return of this pain, only more severe. He bowled one or two more balls, and, when it again came his turn to bowl, felt weak and asked for whiskey, and before bowling each ball took a drink from the flask, and, on the completion of his over, gave up, feeling very much distressed, the pain extending over the chest, and more severe. He laid down on the damp ground for a few minutes,

* Read before the London Medical Society.

when he was persuaded to go to his hotel, where he was seen by two physicians. His pulse was rapid and weak, the heart's action labored, prostration great, and the pain now extending over the chest and down the arms. Digitalis and brandy were freely given. He was removed from his bed to a train by a cab, and on reaching London the pain in localities named was most excessive, but the pulse and breathing became more regular and natural. He walked from the cab into his house, and, after a hypodermic injection of morphine, passed a very fair night. On the morning of the 12th the pain was slight, not localized, but extending over the chest, down both arms, and between the shoulders; pulse better, no dyspnea, no irregular pyrexia. Remained comfortable for several days, during which time physical examination of the heart was negative. The sounds were clear, not associated with murmurs; no friction sound.

This was followed in several days by paroxysms of pain, extending, and more severe, down both arms, after a comfortable night, and up to three or four o'clock p.m.; then followed by pains lasting from half an hour to two or three hours, usually relieved by heat and hypodermic injections of morphia. In addition, there were pains in the hips, abdominal muscles, and right gluteal region, of an intense character. About the tenth day all pain ceased, leaving him comfortable, though weak. He said he felt much better, and, to all appearances, on a good road to recovery, when, without any premonitory symptoms, phlebitis in both legs developed, abscess threatened in the calf of the left leg, also indications of the same complication in both arms. This unfortunate condition lasted about five weeks, during which time very little constitutional disturbance showed itself. There were no symptoms of thoracic trouble during this complication; the pulse remained good, and he made a good recovery.

He went to his office for the following four weeks, then took a trip through New York State, combining light business with pleasure, being absent about six weeks. When at his office, and while away from the city, he was not able to take active exercise, on account of soreness in his legs, and was cautioned not to do so, or to lift or strain himself in any way, as from the beginning, aneurism of aorta or some of the large vessels was feared, but after a careful examination by four physicians no definite symptoms presented themselves to warrant such a diagnosis.

During his absence from the city he felt well and looked well up to last week, when he took an attack of influenza, with severe bronchial symptoms—cough was violent—from which he recovered perfectly.

On Sunday, five weeks before the time of his death, he went to dine at his brother's, feeling well, as he said, in every way. While there he was compelled to lift his brother, who weighs about 200 lbs., from his bath, he (his brother) being found insensible in the bath. The lifting of a limp

person of this weight, slippery from the water, during the consequent excitement, you can easily imagine, meant a great strain, although, when seen an hour after, he made no complaint. He had no precordial pain, nor did he, at any time during his last illness, complain again, except during the week previous to his death. On the Tuesday following the lifting, he had a slight attack of vomiting, following the taking of a quantity of ice-cold, badly-cooked gelatine, and did not feel so well during the day, and in the evening he had a chill, unaccompanied by any coldness of the extremities or any premonitions of a chill. Pulse full and regular; no pain. The vomiting continued almost uninterruptedly for four days, a great amount of mucus coming up, the vomiting being associated with these peculiar nervous rigors or chills at intervals from three to six hours; afterwards vomiting and chills at intervals of from eight to ten hours, then by degrees, from four to five days apart; rarely followed by any elevation of temperature, and only on one occasion was it at all high, namely, 102° . The vomiting was diagnosed as catarrh of the stomach, the chills, which sometimes lasted for an hour, much resembling the nervous disturbance one so often sees at the bedside after a case of confinement. Between attacks of vomiting he felt well, and ate all bland and easily assimilated articles of diet. Much improved during last week, but gained strength slowly, when suddenly the old pain in chest, down the arms, and between the shoulders showed itself, not lasting over an hour, nor excessive at any time; pulse became gradually more rapid, some loss of volume, but not more than could be expected from one passing through this amount of sickness; heart sounds, natural; tongue, clean; urine, normal. On the morning of January 2nd, five months, less seven days, from time of injury, felt well, pulse no weaker than during previous week, no dyspnea, but towards middle of day noticed severe pain on right side of neck. At about 4 p.m., a severe chill, with substernal pain. At 7 p.m., pain continuing, and sense of anguish and suffocation, countenance anxious, face pale, heart sounds regular, but muffled and weak, complained of eructations of gas. Bismuth and soda were given, with rapid stimulation. Patient perfectly rational; took fairly good nourishment at 6 p.m., and enjoyed it; at 9.30 suddenly gasped, and expired.

The *post mortem* revealed a ruptured heart—the lower anterior surface of the left ventricle close to apex. The pericardium contained a large clot. Over anterior surface of this organ the pericardium was adherent, the adhesions extending from over the point of rupture to two-thirds up the anterior surface of the organ, although when pericardium was opened only traces of broken adhesions over seat of rupture presented themselves, no doubt being torn away at some subsequent period. Heart, somewhat larger than natural, but not fatty. Valves, normal and healthy. The larger

vessels leading from and surrounding the heart, normal. The lungs almost abnormally small, although healthy. The liver very much enlarged, but not diseased. The kidneys and abdominal viscera, normal.

Such is the beginning and end of a case, the small details of which I hope have not been wearisome to you. To what cause this rare and interesting pathological condition owes its origin, it is very hard to determine. In this case an almost perfectly modelled man is the victim. Spontaneous ruptures, in contradistinction to rupture from external injuries, are nearly always the result of a strain, or of pressure acting from within upon the muscular walls, and we know that such lesions take place usually under one of the following conditions, viz., fatty degeneration of the muscles, and softening in consequence of embolism of the coronary arteries, suppurative myocarditis and gummatous growths ; and Fagge mentions several instances in which no such changes have been detected.

A microscopic examination fails to reveal anything except small cell infiltration as a result of subacute inflammation set up ; and inspection shows, no doubt, an internal incomplete rupture where the muscular fibres have been torn apart, layer by layer successively.

Nature came to the rescue almost immediately ; the walls of the pericardium, being glued over the seat of the rupture, served to thicken and strengthen this part, and in this case to prolong life for a most remarkable length of time. Osler quotes a case as living eleven days ; Fagge, one of nine days ; but I have not been able to find any authority where life has been prolonged from the onset of the symptoms, as this case, I think, clearly shows, viz., one hundred and forty-five days ; and had it not been for the unfortunate lifting and excitement at the time which I have mentioned, three weeks previous to death, I think I am within the bounds of possibility in expecting life to have been prolonged to a still greater number of days. The influence of age in relation to rupture of the heart can be distinctly traced. In one hundred cases, as quoted by Quain, two-thirds of the patients were over sixty years, and only three between thirty and forty years. The age of this patient was thirty-five. In the hundred cases noted, fatty degeneration was the cause of rupture in seventy-seven. In seventy-six out of the hundred to which I have alluded, the left ventricle was the seat of rupture, and in forty-three of these the lesion was in the anterior wall. The right ventricle was found ruptured thirteen times ; the right auricle, seven times ; the left auricle, twice ; and a rupture was found in the septum four times. These results correspond remarkably with those of other writers on the subject. In the case which I have mentioned to-night, the lesion was in the anterior wall of the left ventricle.

The almost complete absence of symptoms of endocardial or myocardial disturbance during the first stage of the injury is also a rarity, but, I

think, only strengthens the theory of a gradual rupture. A subacute inflammatory action must have been going on. Dr. Moore, who watched the case most carefully, found little or no elevation of temperature during the first few weeks, no presence of a murmur at one or other of the cardiac areas, the beats not accelerated, the sounds not weak or muffled. Fortunately, Mr. Chairman, these cases are rare, and, while we can carry away no points of great practical value from the details of such a case, probably the rarity of such cases, and the unusual time in which life was ingeniously prolonged, I hope may be of some interest to all, and I think it also seems to demonstrate the great advantage gained by *post-mortem* examinations—a something we are usually too loath to press for. I believe it is a duty every physician owes to himself. An active practitioner usually cannot afford the time, when the opportunity might present itself, but I believe the time so employed will be more profitable to him than the pursuit of his profession in any other channel.

DISCUSSION. Dr. Campbell thought it a very excellent paper. Fortunately, such cases were rare. He considered that if the patient had not undergone the strain of lifting he might have lived a much longer time.

Dr. Ferguson was much impressed with the wonderful restorative powers of nature, and thought we should resort more to rest, especially in obscure cases.

Dr. McCallum suggested that the case was one of aneurism of the ventricle, with subsequent rupture.

Dr. Hodge inclined to the belief that it was an aneurism, which had subsequently ruptured. He urged the necessity of *post-mortem* examinations, and the benefits of keeping accurate histories of cases.

Dr. Gardiner complained of the difficulty of getting consent to a *post-mortem* examination in many cases. This case illustrated how futile we are in many cases, even with all our modern instruments, to assist in diagnosis.

Dr. Gardiner found in all his cases, except one, that the ear affected was the right one.

Dr. Butler, replying, thought the left ear was the one principally affected, on account of the blood supply being in a more direct line from the heart. Perforation, he thought, could be prevented by supporting the drum by means of a plug of cotton passed in against it, and the making of a puncture when the proper time came. He objected to poultices, as they were liable to set up an eczema of the auricle.

Dr. Hodge agreed as to the suddenness and virulence of the onset. The abstraction of blood from over the mastoid cells gave marked relief.

Dr. Campbell had employed similar treatment in quite a number of cases during the last epidemic of influenza. Some cases went on to sup-

puration, in spite of the treatment. He gave morphia for the pain, but had never abstracted blood for its relief.

Dr. Ferguson mentioned a case where the administration of quinine had markedly increased the patient's discomfort. In his cases, in all except one the left ear was affected. The reason he could not detect.

RECENT EXPERIENCES WITH AXIS TRACTION FORCEPS.*

BY WILMER BRINTON, M.D.,

BALTIMORE.

LOUISA JACKSON, colored, was admitted to the Maryland Lying-in Hospital, June 8th, 1893. She was pregnant with her first child; æt. 19 years. She made the statement that the "first day of her last sickness" was October 5th, 1892. Within two weeks after she entered the hospital, in the presence of a class of students, I measured her pelvis, using for this purpose a Schultze pelvimeter, and my hand. I found the transverse diameter normal, but that there existed a marked contraction of the antero-posterior diameter of the superior strait, being three and a half inches (Monies). At this time, and in the presence of students, I stated that, from the measurements, I was sure that the woman would have a difficult labor, but that, if nature did not do the work, forceps would deliver her, without the necessity of other operative measures on mother or child. Labor pains began a few minutes past midnight, July 20th, 1893. An examination then made by my assistant found the child presenting vertex, with the occiput to the mother's front and left (Occipito-Leva Anterior). From this time on the pains continued, with more or less severity. At 3.30 p.m., some fifteen hours from the beginning of true labor, the membranes ruptured spontaneously. At 5.30 p.m. a hypodermic injection of one-quarter of a grain of morphia was given. She then slept "off and on" until eight o'clock, when her pains began again, and were of a severe character. I first saw this woman at midnight, after she had been in labor twenty-four hours. I found her in a good condition, pulse being about one hundred, but she complained of feeling thoroughly exhausted. An examination per vaginam found the cervix about half dilated; the child's head above the superior strait, and movable; the heart sounds of the child, which were heard to the mother's left side, indicated that the child was in no immediate danger. Under the existing condition, we determined to postpone operative measures until early next morning. Hydrate of chloral, grs. xv., was now given every twenty min-

*Read at a meeting of the Maryland Clinical Society, February 2nd, 1894.

utes until a drachm was taken, and from 3.30 o'clock in the morning until I saw her at six o'clock she had hot vaginal douches every thirty minutes. When my colleague, Dr. Crouch, and myself examined this patient at this hour, we found no material change from the examination made at midnight, with the exception of the cervix being more dilated and dilatable. The head was still movable, the mother was in quite an exhausted condition and we determined on operative measures in the interest of both mother and child. What should it be? Version or high forceps? With some predilection is for version in this class of cases, yet we determined on high forceps. The woman was thoroughly chloroformed, and Lusk's modification of Tarnier's forceps were applied. After considerable traction, lasting "off and on" for about forty minutes, we succeeded in delivering her of a living female child. A tear of the perineum was immediately repaired. A brief history of the case, as taken from the hospital record book, is as follows: First stage of labor, twenty-nine hours; second stage, fifty minutes; third stage, ten minutes; presentation, vertex position, O.L.A.; child, female; weighed six and a half pounds; length, eighteen inches. The child was nursed by its mother, who left hospital August 3rd, 1893, after an uneventful lying-in period.

CASE 2. At 2 a.m., January 22nd, 1894, my associate, Dr. J. F. Crouch, was called to see Mrs. T., a native of Ireland, æt. twenty-four years. He found her in labor for the second time. She had had true labor pains for two days before the doctor was called. The membranes had ruptured spontaneously forty hours before. From an enquiry made at this visit, it was ascertained that her first labor must have been a very difficult one. She had been under the care of a midwife for nearly two days, when, finally, a doctor was sent for, and, after great exertion upon his part, she was delivered of her child, which lived only a few minutes. An interval of two years elapsed, when she conceived again, and, as stated, after having been in labor for nearly two days, Dr. Crouch was then sent for. He found the child presenting vertex, head high up, and movable; fetal heart heard distinctly to the mother's left. The "os" was found dilated to the "size of a half dollar." The pains continued all day Monday without progress. I first saw this woman at five o'clock in the afternoon, some fourteen hours after Dr. Crouch first saw her, and nearly three days from the time she first went into labor. I found the patient in an exhausted condition, pulse 128, and bad. She was extremely restless, rolling from one side of the bed to the other. A vaginal examination found the parts hot and dry, the cervix dilated to the size of a silver dollar, but rigid and edematous, the presenting part, in my opinion, being a brow. While examining, I pushed up the presenting part, and, in the light of subsequent events, I believe, I

caused enough flexion to transpose what was, undoubtedly, a partial brow into a vertex presentation. While thus engaged in pushing up the presenting part, I had no trouble in making out with my fingers a marked deformity. The promontory of the sacrum projected to such an extent that the antero-posterior diameter of the superior strait was estimated to be less than three and a half inches. We revisited our patient at eight o'clock p.m., found no progress, pulse more rapid, exhaustion very decided, the cervix more edematous, the head still movable above the brim of the pelvis. We decided to delay no longer. Chloroform was given to full anesthesia. Neal's axis traction forceps were applied, and, after considerable traction, a medium-sized male child was delivered. The child was asphyxiated, but was soon restored to animation by the usual methods. The placenta was delivered by Crede's method fifteen minutes later. The uterus contracted and retracted well, but considerable blood was lost; but the hemorrhage was soon under control by kneading the uterus—hand in uterus—and uterine injections of hot water. The patient has had no trouble during her lying-in period, and now, on her eleventh day, is going about her room. The child still shows evidence of pressure about the cranium, but is prospering, and will do well. As we never saw the woman until we were called to see her after being in labor two days, we did not have the opportunity of measuring her pelvis. We hope to do this accurately within a fortnight, and we shall report the results later. In this case the deformity was of such character as to lead one to indulge in thoughts of the fashionable "fad"—the now popular operation, Symphysiotomy. But, even with this operation, could our results have been better?

OYSTER POISONING.

BY J. H. HOWELL, M.D.,

WELLAND, ONT.

ON the evening of December 6th, 1893, Mr. Z., æt. twenty, and his sister, a few years older, partook of stewed oysters at supper. About eight o'clock I was sent for, and on arriving found both complaining of severe pain in the epigastric regions, a sense of oppression in the precordia, with a feeling of suffocation. The pulse was rapid and feeble, the conjunctivæ injected, the face swollen, and the entire body covered with an urticarial eruption, which gave rise to intense burning and itching. On inquiry, I learned that three young lady boarders had taken some of the broth, but had not eaten any of the oysters. One of them experienced a little nausea, but no other symptoms. As all had eaten of the other articles of food provided for supper, and Mr. Z. and his sister were the only ones who had eaten of the oysters, I at once concluded that they were the cause of the trouble. Mr. Z. had vomited freely, which had given him some relief from pain. I gave Miss Z. a hypodermic of apomorphia, and had her take a copious draught of tepid water, which soon produced a free emesis, followed by much relief from the pain. I had a carbolic lotion applied to the skin, which soon relieved the burning and itching. Under the use of stimulants they soon became quite comfortable, but depressed. As both had frequently eaten oysters before—in fact, were very fond of them—I concluded that the oysters must have been somewhat spoiled, and that the poisonous effects were caused by some toxic principle which had developed. They stated that there was nothing noticeable in the taste of them, and that the quantity eaten was not excessive.

On the evening of December 28th I was again summoned, and found Mr. Z. and his sister with the same symptoms as before. They stated that they had procured some fresh oysters, and had eaten only a small quantity, with the result that in about half an hour they both became very sick. Another sister had eaten heartily of them without any bad results. I therefore concluded that they were cases of oyster idiosyncrasy. Miss Z. was just recovering from an attack of la grippe, and I did not care to give

apomorphia ; but after trying a variety of emetics without success, I gave her a small hypodermic, with the result that she soon vomited freely. In other respects the treatment was the same as before, but they both felt very sick all night, and were quite miserable for a day or two.

These cases present some very peculiar and interesting features. Poisoning from eating certain kinds of shellfish, especially the mussel, is well known ; but, as far as I can learn, oyster poisoning is somewhat rare, and, when we consider the large consumption of them, the cases certainly seem worth recording. On making inquiry, I learned of several persons, including the members of my own family, that they had eaten on the same and following days of oysters procured from the dealer who had supplied them on the first occasion, and, as he had only one keg on hand at that time, must necessarily have eaten of the same kind. The dealer admitted having kept them for several days of mild weather, but said they were packed in ice. If the cause of the trouble was some toxic principle, it seems strange that others should not have suffered as well. The fact that on the second occasion one sister ate heartily of them without a single bad symptom makes it evident that, in some way, oysters had become a poison to these two individuals.

The peculiar and, to me, mysterious features of the case are that two persons out of a number who ate the oysters should have developed this idiosyncrasy, when oysters had always agreed with them previously.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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TREATMENT OF CHOREA AND ENURESIS BY INJECTIONS OF TESTICULAR EXTRACT.

Deydier (*Lyon Médical*, 1893, No. 16, p. 548) publishes five observations of chorea, and three of nocturnal incontinence of urine in children treated by this method. In one case of chorea the improvement was almost instantaneous, and cure was complete after seven injections. In three other cases improvement was observed after the third injection, but cure was not attained until after three weeks or a month of treatment. The fifth case was absolutely rebellious to treatment.

In the cases of enuresis, with one child each injection prevented the incontinence during the night following the injection, but on that night only. In another case, a child of five years was radically cured by one injection and the dread of a second. Finally, a third child was seized shortly after the injection with alarming nervous symptoms (fainting, abdominal pains, vomiting), and the operation was not repeated. The child remained eight days without wetting the bed, and then recommenced it. In all the cases of incontinence suggestion or fear appeared to play an important part.

Except in the single instance mentioned, all the patients bore the injections well. The dose was one-half a cubic centimetre. Only a little pain and inflammation at the point of puncture was noted.—*American Journal of the Medical Sciences*.

THE PATHOLOGY OF ACUTE PERFORATING ULCER OF THE STOMACH IN YOUNG ADULTS.

Only passing reference is made in this article to simple chronic ulcers, and the multiple ulcers of the stomach which are apt to occur in acute specific fevers, such as typhoid, pyemia, and erysipelas. The acute ulcers referred to have the following characteristics: They generally occur in young adults, mostly females, between sixteen and twenty-five years of age; they are almost always solitary, two being rarely found; occupy exclusively

the pyloric region, generally on or near the lesser curvature; are seldom larger than sixpence; edges slightly raised, but not thickened or indurated; funnel shape, with apex towards peritoneum; no signs of inflammation around; their onset is rapid, with acute pain after food, relieved by vomiting; local tenderness over pyloric region; hematemesis; recovery often speedy under proper treatment. This variety of acute ulceration is evidently a distinct entity, and the author maintains that the ordinary theories of the pathogenesis of gastric ulcer are wholly inapplicable to this variety. The causes of gastric ulcer generally given are then discussed.

(1) *Embolism*. Pavy, Cohnheim, and others have proved that any sudden obstruction to a gastric artery is followed by death of the mucosa supplied and ultimate formation of a perforating ulcer. The experimental facts are beyond dispute, but the theory is quite inadequate to explain the disease as it occurs in man; for (a) emboli are never found *post mortem*, and no possible site for their manufacture has yet been discovered in all the cases examined. (b) Even in ulcerative endocarditis, the stomach always escapes embolism. Of one hundred and twelve autopsies on cases of ulcerative endocarditis, sixty-two per cent. had embolism of various viscera, but in not a single case was the stomach affected. (c) The ulcers following *artificial* embolism of the stomach are not found in the pyloric region, where acute perforating ulcer occurs. As this is an important point, the author spent considerable time in determining the course usually followed by various emboli, such as tobacco seeds, powdered wax, and silver sand, when injected into the circulation. The injections were made both in living and recently killed animals, including rabbits, guinea-pigs, and dogs. In only three to five per cent. did the emboli reach the stomach, and in no instance was the pyloric region alone affected. Similar experiments on the human body after death gave the same results: less than two per cent. of the emboli reached the stomach, and these lodged almost invariably in the vessels of the cardiac end. In like manner, embolism resulting from disease of the vessels in the vicinity of the stomach generally affects the large arterial trunks at the fundus. Thus in a case of aneurism of the celiac axis, though numerous gastric ulcers from emboli were found, there were comparatively few at the pyloric end. (d) Experimental ulcers from embolism are accompanied by intense congestion and extravasation into the mucosa, and the edges or base show signs of hemorrhagic origin; but in the idiopathic disease the author has never detected signs of hemorrhage or inflammation in the surrounding tissue.

(2) *Arterial thrombosis* from atheroma, etc., is next discussed. It is common in the stomach, and probably the most frequent cause of chronic ulcer in elderly people, or in phthisis, with lardaceous disease, and such

ulcers occur in the pyloric region. But, in the first place, they are chronic ; next, they are often multiple, oval, or irregular, with a smooth, shallow base, and indurated, sloping edges, with rather a tendency to spread superficially than to perforate, thus exhibiting a picture which bears but little resemblance to the crater-like acute form. Moreover, the author has never found in acute perforating ulcer any signs of primary arterial degeneration, nor any account of such in the literature of the subject.

(3) *Venous obstruction.* Ligature of the portal vein has been shown by Müller to cause ulceration of the stomach ; but the author tries to prove that obstruction to venous flow cannot be a constant factor in acute perforating ulcer. Experiments of tying a small gastric vein in rabbits and cats resulted in neither congestion nor ulceration, which is readily explained by the fact that gastric veins so freely anastomose, and are devoid of valves. Ligature of the portal vein in rabbits which were killed after various intervals caused numerous hemorrhages and ulcers almost entirely confined to the cardiac and middle thirds of the stomach. In gradual obliteration of the portal vein, gastric ulcer is not only uncommon, but is always chronic when it does occur.

(4) *Punctiform hemorrhage* in gastric mucosa may be caused by injuries to the cerebro-spinal nerve system, or by introducing certain albumoses into the blood, or by artificial hemoglobinemia, and it is certain that acute ulceration and even perforation may result ; but from the author's experiments with pyrogallic acid and toluylendiamine he concludes that the ulcers thus produced are generally multiple, show signs of their hemorrhagic origin, and are not commonly in the pyloric region, thus sharply distinguishing them from the idiopathic variety.

(5) *Vascular spasm* in the stomach is advocated by Klebs as a cause of gastric ulcer, and Talma has shown that if the left vagus is faradized for several hours, and then the animal be killed, pyloric ulcers are found. This is explained by the spasm of the pylorus compressing the blood-vessels, and the mucosa thus rendered anemic is readily eroded by the gastric juice. Talma then infers that pyloric spasms play an important part in producing acute perforating ulcer, and he quotes three cases where intense abdominal spasm was followed by hematemesis. But of five hundred cases of gastric ulcer treated in London Hospital, no history of abdominal spasm is found, and the author regards this explanation as unproved, and certainly not a common cause of gastric ulcer.

(6) Although it has frequently been suggested that the solitary glands of the stomach might be the source of some form of ulcer, no general attention has been given to this subject. These glands consist of numerous collections of lymphoid tissue round the deep ends of the secreting tubules,

largest and most numerous in the pyloric region near the lesser curvature. They are very numerous in childhood, while in adults they are almost absent, except a few in the pyloric region. They have often been found enlarged in inflammatory diseases of the stomach, especially in typhoid, acute tuberculosis, and diphtheria, when they often undergo rapid necrosis, and form circular funnel-shaped ulcers. The cause of the funnel shape is probably owing to the contraction of the muscular coat under the irritation of the gastric juice, and as the muscle is most abundant near the pylorus it is especially there that we find funnel-shaped ulcers. Moreover, as soon as the gastric juice has removed the necrotic gland, the ulcer, which is left, no longer shows any signs of its lymphatic origin. Thus in this respect, and in the funnel shape and position near pylorus, acute perforating ulcer may well be explained as arising from the solitary glands. The fact that in typhoid, diphtheria, etc., the ulcers thus arising are multiple is explained because these are general systematic diseases. It is acknowledged that no artificial anemia ever causes enlargement of these glands, and the fact that acute perforating ulcer is single certainly points to a local cause. Now, slight erosions of gastric mucosa are probably extremely common, and small ulcers may arise from consequent lymphatic involvement; if at the same time anemia be present, or the gastric juice be hyper-acid, the ulcer may enlarge and perforation occur. Thus the author argues that the solitary glands may readily be the source of acute perforating ulcer. Definite proof is, of course, not possible as yet; but the author's researches certainly warrant us in regarding the solitary glands as a probable and, perhaps, the commonest source of acute perforating ulcer of young adults. —W. Pollard Fenwick, in the *Journal of Pathology*, Vol. 1, No. 4, June, 1893.

THERAPEUTICS

IN CHARGE OF

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PYROGALLOL IN LUPUS.

Hofrath D. Veiel (*Berliner Klinische Wochenschrift*, No. 39) describes the manner in which he uses pyrogallol for the treatment of lupus vulgaris. The first treatment consists in the destruction of such lupoid tissue as is visible and can be felt. For this he chooses his method according to the locality and variety of the lupus, sometimes a mechanical treatment (scarification, scraping off), sometimes a chemical one (caustic potash, or nitrate-of-silver pencil, or pyrogallol vaseline, ten per cent.), sometimes a thermic treatment (thermo-cautery, galvano-cautery). When the pyrogallol cannot be used alone from the first, he uses a bandage of ten per cent. pyrogallol vaseline salve spread on lint. The first bandage is left for two days; from the third day on the same dressing is renewed once a day. In this manner he seeks fully to destroy any lupus particles which may have escaped the first treatment. This is quickly accomplished. It is advisable to protect the surrounding healthy skin by a plaster (for example, of zinc benzol salve on mull) from the action of the pyrogallol, which produces a very painful irritation.

On the fourth or fifth day the application of the strong pyrogallol is usually exceedingly painful, so that in many cases morphine injections become necessary. An addition of cocaine to the salve did not prevent the pain. The pain is most severe upon the entrance of air when the bandage is moved or opened. The change of bandage should be made as quickly as possible, and very carefully applied. When this pain occurs, it is time to leave off the strong salve and take another course. Formerly the healing was obtained under vaseline or iodoform, but Veiel now uses a weaker pyrogallol salve, which does destroy the lupoid tissue, but does not prevent the formation of healthy granulations. The two per cent.

salve usually fulfils these conditions. If this is too strong, a one per cent. may be used, or even a .5 or .2 per cent. may be used as soon as the granulated surface is formed.

The healing is usually very slow by this method, but the scars are smoother and prettier than by any other method of treatment. Therefore he uses the pyrogallol when the face or any part is affected, where a pretty scar is desirable. When this is no object, he uses transplantation after Thiersch's method, as soon as the smooth granulated surface is formed.

The urine must be constantly watched during the treatment, and the use of pyrogallol at once stopped if albuminuria or hematuria occurs. Veiel has never, in all the cases treated, seen any permanent action upon the kidneys or general health, no doubt because the pyrogallol is used on comparatively small surfaces.

The good results in tuberculosis of the skin led him to try the pyrogallol also for that of the bones. In tuberculosis of the hollow bones it was without result, but cured four cases of caries of the tarsal bone. They were treated during two weeks with the ten per cent., and then, until cured, with two per cent. salve. The cure took from eight to thirteen weeks.

He used a .5 per cent. watery solution of pyrogallol for a girl who had lupus of the conjunctiva, dropping it in the eye daily. She has now been well for a year.—*Therapeutic Gazette*.

SALOL AS AN INTESTINAL ANTISEPTIC.

In *The Practitioner*, Sympton publishes a useful paper on salol as an intestinal antiseptic. He recalls the well-known fact that, after having been swallowed and passed through the stomach unchanged, it is split up in the duodenum by the pancreatic juice into its constituents, salicylic acid and carbolic acid. Their action will be alluded to more in detail later on, but it may here be said that they are thrown out of the body partly by the kidneys (the urine not infrequently being blackened by the carbolic acid) and partly by the intestinal tract in the feces. From experiments on dogs whose pancreases have been extirpated, there seems to be reason to think that salol can be absorbed from the intestine without the intervention of the pancreatic juice. As to its action on digestion, there are different opinions, some authorities saying that it unsettles the digestive processes, and that it actually sets up gastric trouble. These statements refer to its action in typhoid fever, which will be mentioned presently; other observers have, however, noted directly the contrary results. Sympton has personally taken salol in 5-grain doses three or four times a day, both before and after meals, when he has been perfectly well, without experiencing the slightest interference with digestion or appetite.

Before finishing this brief account of salol, it may be said that it has been accused of producing herpes, and of increasing the delirium which frequently occurs in the course of typhoid fever. Sympton has not noticed this latter himself in either complaint, or when he used salol in cystitis.

The stomach undoubtedly is responsible for some cases of dyspepsia where the chyme is passed on to the intestines in an imperfectly-prepared manner, which produces duodenal disorder. But in the following class of cases there is evidence that occasionally the secretions poured into the intestine are at fault. The patient is probably of a "bilious" temperament; he may have a clean tongue, with great loss of appetite, and consequent loss of flesh; no pain during a meal, but coming on about two and a half to three hours after. Very likely he is constipated, and when his bowels are relaxed the motion is grayish white. As a rule, he will not suffer from nausea, only a little retching sometimes, and instead of the gas being acid, as it so often is, it may be quite alkaline and "soapy," as a patient once told me. The seat of pain is the lower part of the abdomen, and is relieved by passing wind. There will, perhaps, be a slight yellowness, hardly amounting to actual jaundice. These cases belong to the same class as those described by Dr. Allchin in his lectures on duodenal indigestion. So, latterly, the writer has been in the habit of beginning with four or five grains of calomel, and following it in an hour or two's time with ten-grain doses of salol every four hours. This, to use the language of a somewhat enthusiastic patient, "acts like a charm" when taken about one and a half hours after meals. The pain ceases, the swelling of the abdomen does not appear, the appetite improves, and, more important still, the wasting—probably due to the non-digestion of a large part of the food—departs.

Salol has also been found exceedingly useful in a form of infective diarrhea. In cases of ordinary diarrhea, too, there are few remedies which more speedily check the flow and the pain than ten-grain doses of salol. Some years ago, in the *Lancet*, Sympton advocated giving glycerin of borax in the diarrhea of infants, believing that undue fermentation in the intestines was the *fons et origo mali*. It does answer well, but salol is to be preferred in the severer cases, in doses proportionate to the age, as it is a little more certain, more antiseptic, and almost as agreeable to take.

Lastly, he has been using salol exclusively in typhoid fever, not so much on the idea of combating the specific poison, but of cleaning and keeping clean the intestinal tract, and so subduing the irritation of the glands of Peyer's patches and other ulcers there, and that caused by the secretion from these ulcers in the intestine. Salol also prevents the excessive formation of wind, which is sometimes so vexatious a trouble to the

patient. Salol brings the temperature down generally one or two degrees, causes abundant perspiration (this can be readily combated by giving oxide of zinc, tincture of belladonna, and some quinine in a mixture), reduces the number of stools from twelve to fourteen in the twenty-four hours to three or four, and, when they are offensive, deprives them of any odor whatever. No bad effects were noticed with regard to its action in producing delirium. Its use was continued in typhoid fever for about a week after the disappearance of diarrhea. It was always given in ten-grain doses, suspended by means of compound tragacanth powder, at first (in typhoid fever and other complaints) every four hours, then every six, and, for the last week, three times a day. It was always given after food. —*Therapeutic Gazette*.

BORACIC ACID IN TYPHOID FEVER.

I. Tortchinsky (*Bolnitchnaia Gazeta Botkina*) has tried boracic acid in 240 consecutive cases of enteric fever during an epidemic. The results were excellent; only nine patients died, every one of whom succumbed during the stage of convalescence, in consequence of getting up too soon, or of dietetic error. The remaining 231 made a speedy and complete recovery. In all the cases the patient was first given from two drams to half an ounce (according to age) of castor oil, with from five to twenty drops of turpentine oil. Immediately after these drugs had acted the administration of boracic acid was commenced, the remedy being given internally, either in powder or in solution, in from ten to fifteen grains to adults, in from three to ten to children, three or four times a day. When bronchitis was present, the drug was combined with expectorants and hydrochloric acid. As a rule, within from three to five days fever and diarrhea markedly decreased, tympanites disappeared, the stools lost their offensive odor and became natural in appearance, the urine became abundant and normal in all respects, the tongue and skin moist, the subjective state good, etc. As soon as the general improvement set in, the acid was discontinued, and tonics were given. Under the treatment the disease ran a very mixed course, its duration was considerably shortened, and complications were very rare. The most striking effects of the acid were obtained in cases which came under treatment in the initial periods of the affection. It was further found that the beneficial action of the remedy could be intensified by combining it with small doses (from two to five grains) of antifebrin, quinine, naphthalin, or salol. The combination with quinine proved especially useful in late stages of typhoid, with tremor, delirium, and other cerebral symptoms, as well as in the case of relapses. No untoward accessory effects from boracic acid were ever observed. The writer arrives at the conclusion that the method is the cheapest, simplest, most harmless, and most efficacious of all yet known. He also obtained equally satisfactory results from the acid in the summer diarrhea of children. —*British Medical Journal*.

OBSTETRICS

IN CHARGE OF

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THE VAGINAL AND INTRA-UTERINE DOUCHE.

Dr. Boxall, of London, in his lectures on antiseptics in midwifery, gives the following directions respecting the administration of vaginal and intra-uterine douches. In employing the douche, especially during puerpery, care should be exercised to wash, first, the parts about the vulva and the external genitals ; then to douche the vagina, and only after this has been done should the tube be carried (and then only when there is some special reason for it) into the uterus itself. By following out this method of procedure, the risk of carrying septic matter from the vulva or vagina into the uterine cavity is reduced to a minimum. Keeping the patient meanwhile in a supine or semi-supine position, the uterus, with one hand placed like a cap over the fundus, may be supervised, and, by now and again compressing and depressing the womb by pressure through the abdominal wall, any fluid which (even when the uterine tube is not used) may have found its way into the uterus will be expelled, and clot or retained membrane will be washed out with the gush of water as it escapes from the vagina.

Dr. Boxall prefers the forcible stream of the continuous douche on account of its obvious mechanical advantage. This may be obtained not only by means of the usual hydrostatic apparatus, which is barely portable, but by requisitioning an ordinary ewer (pitcher), and of a length of elastic tubing an apparatus may be improvised which is capable of meeting all the requirements. The tubing can be converted into a siphon by filling the tubing with air without the aid of a small glass funnel, or by fixing the tubing to an ordinary elastic enema syringe and working the apparatus till the stream begins to flow a continuous siphon douche may be produced. According to the height of the reservoir above the patient, the force of the current can be varied at will. Be careful to fill the apparatus, that the air may be expelled, and to let a sufficient quantity of the solution run.

through it to warm the tube before inserting the nozzle. Owing to the readiness with which it may be cleansed and kept clean, a nozzle made of glass or celluloid is advisable, and for intra-uterine irrigation a double channelled tube is preferable.

MILK SECRETION.

It is said that antipyrine, 10-20 grains nightly for three or four nights, has successfully arrested milk secretion.

A NEW FORM OF ABDOMINAL BANDAGE FOR USE AFTER DELIVERY.

A part of the necessary attention to a delivered woman consists in the long-use sanctioned and, in many cases, undoubtedly useful abdominal bandage.

It was invented with the view of supporting the relaxed abdominal parietes after a childbirth, and it was found not only to do this, but also, when properly applied, to exercise a beneficial pressure on the puerperal womb during the first week of its involution, stimulating it to keep up or increase its contraction.

These are uncontested advantages in an abdominal bandage properly applied and held in place ; its theory is absolutely correct ; but in practice, as any observer with even a limited field of work must admit, it generally falls short of these aims for various reasons, and has on that account been almost discarded by some physicians.

The material used for these bandages up to the present time, as we all know, has been bleached or unbleached muslin, applied either complete or partially cut on each side as a tail bandage. The application itself is made as soon as possible after the removal of the placenta, and with this begin the difficulties of the present bandage. The semi-exhausted woman, whose pelvis and back are in a condition compatible only with completest rest, must elevate her pelvis, or have it elevated—which is still worse—so that the bandage may be slipped under. This done, we pass to another difficulty—the proper fastening of the bandage in front. Our purpose is to apply an even pressure over all the abdomen, and this with the most common, complete bandage is well-nigh impossible ; with the tail bandage it is much easier, yet not even here is the matter so simple as it would appear.

Having succeeded in applying our bandage perfectly, the first thing we see at our next visit to the patient is that it has slipped off, forming a mass of distressing wrinkles under the back, and having all its pressure relaxed ; or, if we applied the bandage low enough to avoid this, we find it soiled so much that we ourselves must unfasten and take it off. And

the second application causes more inconvenience, as a rule, than the first.

Having all these difficulties in view, I have tried to replace the old bandage by something that, possessing the same or probably greater advantages, would not have these drawbacks, and I think I can safely say, though the extent of my experience hardly warrants it, I have succeeded.

I have had a case of oblique presentation in which, after delivery, the uterus retained an oblique position, the fundus lying entirely on the right ilium; there was a history of an injury affecting the region of the left broad ligament in the first part of gestation. I was able to reduce the uterus to the normal position manually, but as soon as my hand was withdrawn it returned, giving rise to local pains and distress. I ineffectually tried a compress and the usual bandage, and on my third visit resorted to a compress held in place by strips of adhesive plaster, and this worked to my perfect satisfaction, suggesting to me at the same time the entire replacement of bandage by adhesive plaster.

Trying it in practice since then, I have found it work admirably; it overcomes one and all of the disadvantages of bandages, and effects more than the best of them.

Six two-inch strips of plaster usually suffice. They are cut of a sufficient length to pass over the abdomen from one to the other of the quadrati lumborum muscles. Over the surface of the abdomen a thin layer of cotton is laid, leaving about four inches on each side for the plaster to adhere, and if advisable in uterine atony, or required from some other reasons, a suitable pad is put on the cotton, and then the strips are applied over it, beginning with one over the compress. The woman is spared the slightest motion. There is no soiling, no possible infection as from unsterilized muslin, the plaster adheres perfectly, and serves its purpose better than the most carefully applied bandages could do, and it can be removed or reapplied with the greatest ease, not interfering in the least with abdominal examination.

I hope my little invention will attract the notice of my professional brethren. I do not know but some one may have employed the same before me; in that case, I would join my humble voice with his, and recommend the adhesive-plaster bandage heartily.—A. Hrdlicka, in *New York Medical Journal*.

SURGERY

IN CHARGE OF

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GANGLION.

Dr. H. M. Jordan (*Lancet*; *Medical Chronicle*), in a paper on this subject, reports twenty-five cases treated by injection with Morton's fluid. After enumerating the explanations of various authorities of the causation of the lesion, the author supports the view that it arises from a hernial protrusion of the synovial membrane through a slit or rent in the fibrous sheath, the neck being compressed by the tightness of the rent in the sheath; a plastic inflammation is set up, obliterating the neck, and the sac is thus shut off from the rest of the synovial cavity. His reasons for this view are: (1) The frequency of the affection in persons who occasionally have hard manual work to perform, such as charwomen who have "wringing" to do; (2) the sudden and painful onset succeeding some exceptionally hard work, as noticed in the cases quoted; (3) the results of careful dissection, showing that the fibrous capsule of the sac is of new formation from areolar tissue, and not a mere expansion of the fibrous sheath.

The various methods hitherto adopted for treatment are mentioned at some length, namely: (1) Rupture by pressure of thumbs, or by sharp blow; (2) electrolysis; (3) puncture and scarification, a valvular opening being made into the cyst, the contents squeezed out, and the interior thoroughly scarified, followed by the use of splints and gentle pressure; (4) seton; carbolized silk, gut, or horsehair being used; (5) incision into cyst, and then allowing it to granulate up from the bottom; (6) excision, by carefully dissecting out the unopened cyst, and then cutting it away from the sheath.

These methods are objected to for various reasons—recurrence, supuration in sheath, matting of tendons together, unsightly scars.

It is by a combined method of aspiration and injection that the author has treated his cases. The object aimed at is to cause inflammation of the synovial tunic, which becomes covered with layers of plastic lymph, and this lymph, subsequently organizing, the synovial membrane as a secreting surface is destroyed, and by keeping the walls of sac in apposition the cavity is obliterated.

The operation is thus described : The part being scrupulously cleansed, a large hypodermic syringe, with a wide-bored needle, which is screwed on, after being carefully aseptitized, was thrust into the ganglion, and the contents withdrawn. Often there was considerable difficulty in getting these to flow through the needle, in which event firm pressure on the tumor synchronous with the aspiration overcame the difficulty. The syringe being unscrewed, with the needle left in position, a piece of lint wrung out of a five per cent. carbolic acid solution was placed at once over the needle. The syringe, emptied and then filled with Morton's fluid, was rescrewed on to the needle, and the sac partly filled. On withdrawing the needle, the "tumor" was freely manipulated to insure the fluid reaching every part of the interior. A splint reaching to the finger tips was applied, and a thick, tightly-folded pad of lint firmly strapped over the tumor, and the arm suspended in a sling.—*Atlanta Medical and Surgical Journal*.

[We can indorse the injection treatment of ganglion, but would substitute for the Morton fluid (which is, iodi., grs. x. ; pot. iodide, grs. xxx.; glycerine, ℥i.) a solution composed of spts. vini. rect., ac. carbolic, glycerini, equal parts. The latter solution, employed with the technique given above, answers admirably in inflammation of the prepatellar bursa (housemaid's knee).—L.M.S.]

ACTION OF THYROID SECTION.

Professor Greenfield deals with this important subject in the Bradshaw lecture on "Diseases of the Thyroid Gland," published in *The Lancet*. Its bearing on the question of surgical interference with the thyroid is obvious.

Whatever other functions may be subserved by the thyroid gland in the animal economy, whether in blood formation, proteid metabolism, or as supplementing the action of other organs, we cannot now doubt that all its more important functions are due to a secretion which can be separated, though not, as yet, in a pure state. This is abundantly shown by the fact that the symptoms and deleterious results of atrophy, congenital deficiency, or removal, can be averted or cured by a substance chemically separated, and introduced by the stomach. This fact, if it threw no other

light on the physiology of the thyroid gland, serves to abolish all the theories grounded on the view that it acts by the removal of a poisonous substance from the blood, or by transforming mucin into "colloid" *within* the gland. True, it does not prove that no such action is exerted by the substance within the blood or tissues, but it minimizes the previous observations as to the accumulation of mucin, etc., in the blood as explaining any part of the pathology of myxedema. And if, as seems probable, the essential constituent of the secretion should prove to be of the nature of a ferment, the usefulness of the colloid material, unless to dilute, and delay the activity of the secretion, will also be negated. I have recently made numerous observations on the nature of the substances contained in thyroid extracts; but, since others more competent are engaged in the work, I need only refer you to such papers as that of Mr. Edmund White.* No one can, after such observations, question that the amount of the active ingredient forms a very minute proportion of the extract from the gland.

The physiological action of the secretion on healthy animals, and in various diseases, also urgently demands further investigation.

Both from the changes found in myxedema, and from experiment, there can be little doubt that the thyroid secretion has an especial action on the skin. It appears especially to affect the sweat glands, stimulating their activity, and probably also promoting the nutrition and activity of the other structures of the skin. It is possible that this action is exercised through the sympathetic nervous system, either by vascular control or otherwise; but some considerations suggest a direct action on the vessels, or on the glands themselves. What effect it has on the central nervous system, and in what manner this is exerted, are subjects for further experiment. It is possible that it may act partly through the vascular supply, partly, in a direct manner, on the nervous tissue. One point of especial interest is whether, under normal conditions, its activity is limited to the cervical sympathetic ganglia and some of the medullary centres.

The observations of the action of thyroid extract in myxedema can, of course, only be accepted with some deductions. Where only a moderate dose has been employed, the effects of restoration of the normal conditions as to temperature, skin excretion, action of the kidneys, restoration of the general nutrition and of the cerebral functions, are well known. Valuable evidence is also given by the effects of overdoses, where the rise of temperature beyond the normal, the acceleration of pulse and its characters, and the production of sweating, diarrhea, etc., correspond in many respects with the phenomena of Graves' disease. A few observations are also recorded by medical men on themselves. Such are those of Dr. Alexander Haig, who found that relaxation of the arterioles, diuresis, etc.,

* "The Pharmacy of the Thyroid Gland," *Pharmaceutical Journal*, Sept. 2nd, 1893.

were produced by it. The only satisfactory observation I have made on a healthy subject was one in which dried tabloids were given, the effect being a slight irregular rise of temperature and tachycardia. It was noted that the tachycardia and ready excitability persisted for some days after the drug was stopped. The glycerine extract had proved inert in this and other cases.

We cannot but be impressed by the fact that the partial arrest of several functions in athyrea is removed by thyroid secretion, and that their activity may be exaggerated by an overdose; one is, indeed, inclined to think that the evidence in this respect is conclusive as to the physiological effects of the secretion. At the same time, one cannot but see that there are flaws in the argument from a strictly scientific point of view, and that it does not serve as conclusive proof that a mere excess of the secretion is an essential factor in Graves' disease. Nor does it seem to me that experiments on the healthy human subject can rightly be made to afford conclusive evidence; for, if the disease were due simply to exaggerated activity of the thyroid, we must, in order to produce all the phenomena of Graves' disease, push the administration to a degree which would be dangerous, and which might lead to permanent damage to the nervous centres and to the heart. For this reason experiments on animals are essential. In them the doses might be of such amount and duration as to cause changes in the central nervous system which could be studied microscopically, and might reveal similar changes to those which I have described.

There is one point of especial importance in respect to experiments on healthy animals. In relation to all active secretions there are means by which either the production is controlled or the excess removed. In prolonged athyrea the control is removed; and probably, as in all functional abeyance, the controlling mechanism becomes defective, and its agents atrophied. Hence we should expect that the effects of artificially introduced secretion would be more intense than in healthy animals. After partial recovery the control is probably regained; but in healthy animals, unless this control system is paralyzed, the effects cannot be expected to be so great. We do not know, and can only infer, wherein this control lies, and, in the human subject, we might find that unexpectedly serious results might follow if disease of the necessary organs existed. It seems probable that the skin especially, the mucous membrane of the alimentary canal, and possibly the kidneys, are the chief sites of excretion.

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

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ACUTE MENINGITIS TREATED BY DRAINAGE OF THE SPINAL CORD.

In the *Lancet*, 1893, ii., 873, Stephen Paget reports a case of acute tubercular meningitis in a boy aged eight years, in which drainage of the cord was resorted to. The arches of the fourth and fifth cervical vertebrae were removed, and the dura punctured. The operation gave relief for a day, and he died four days later.

ACUTE SUPPURATION OF THE TYMPANUM AFTER OPERATION.

In *Archives of Pediatrics* for February, 1894, Dr. J. O. Tansley reports a case in which suppuration occurred in the tympanum following removal of adenoid growth of the pharyngeal vault. On the second day there was a slight perforation of the drum, and moderate discharge of pus. On the following day the temperature was 104° ; pulse, 120; contracted pupils and severe headache, chiefly at the vertex and frontal region. There was considerable pain in the ear, and great restlessness. Upon examination, it was found that the perforation was discharging pus, and that the upper and posterior portion of the drum was inflamed. The diagnosis was acute inflammation of the attic, superimposed upon the previous inflammation of the tympanum proper. The serious symptoms were probably caused by a very thin, bony—probably none—separation of the attic from the cerebral cavity. It was thought wise, in order to prevent extension to the membranes, to make a liberal opening into the attic. On the following day, the symptoms continuing as before, the operation was done. By reflected light, a Graefe's cataract knife was made to pierce the drum membrane just behind and upon a level with the short process of the malleus, and, upon piercing the drum, it was carried forcibly directly upwards and outwards for certainly half an inch, passing directly over

rough bone in the incision. There was free bleeding. The ear was washed out and closed with borated cotton. The operation was done at 1 p.m., and at 6 p.m. temperature was 101° ; pulse, 100; patient much easier. At 12 p.m., temperature, 100.2° ; pulse, 93. Improvement continued, and three days after operation temperature was normal; no further trouble. The incision healed readily, and breathing was perfect.

The author believes that energetic treatment in this way will, as a rule, prevent development of cerebral or mastoid difficulty, and that it is folly to dally with leeches and hot water.

ANAL FISSURE AND PAINFUL EROSIONS OF THIS REGION IN INFANTS AND YOUNG CHILDREN.

Anal fissure and painful erosions occurred often in young children. The history frequently showed that up to a certain time the bowels acted regularly; then constipation became the rule, and when the bowels moved there was pain. The fear of pain caused the child to put off nature's demand as long as possible.

Anal fissures may be above or below the ring. On exposing the parts the fissures would be seen filled with feces, the area around often denuded. It was the writer's conviction, however, that more frequently there was erosion alone, which was situated above the ring, and could only be seen after surgical dilatation under anesthesia.

Where there was persistent constipation which failed to yield to dietetic regulation, which was accompanied by painful stools, the diagnosis of fissure or painful erosions was justified, and called for treatment which would not only cure the lesion, but also the constipation. The treatment advised was first inducing chloroform anesthesia, then stretching the anus and applying the Paquelin cautery to the eroded surface. A tampon of cotton was introduced, and after twenty-four hours removed. Five cases had been treated in this way with signal success, curing both the constipation and pain.

In the treatment of mild constipation a good fluid extract of cascara sagrada was the most useful unnoxious drug.—Henry Koplik, *Archives of Pediatrics*, February, 1894.

INTUSSUSCEPTION IN CHILDREN.

In the *British Medical Journal*, February 17th, 1893, Mr. Arthur Barker records seven cases of acute intussusception in young children. All were infants under eighteen months except one boy of four years and one of twelve years of age. One was healed by repeated injection and inflation alone, with apparent reduction each time, until gangrene and collapse

came on, with speedy death. Six were treated by laparotomy after injection had failed completely. Of these, three recovered perfectly, one aged four years, one five months, and the last seven months. The author points out that, out of the six operated on, three at least could not possibly have been reduced by inflation or injection. For in one the intussusception was high up in the small intestine, and in the other two several inches of ileum were prolapsed through the ileo-cecal valve. In all the seven it might be said, then, that injection failed, and in three it must have failed. In spite of this, laparotomy saved three out of the six operated on. Examination of the fatal cases proved that the result was not due to the operation, but rather to the fact that the operation was too long delayed. From a study of these seven cases, together with eighteen cases with ten recoveries, taken from University college records—in all, twenty-five cases—the author arrives at the following conclusions :

(1) That in all cases of intussusception in children injection of water or manipulation should be at once resorted to if the patient is seen within a few hours of the onset of the strangulation.

(2) That if these means fail after a fair trial, not too much prolonged, laparotomy should be at once done as the safest treatment.

(3) That there is a certain proportion of cases, among all the varieties of intussusception, which no amount of injection will relieve, or in which injection would be dangerous, and these can only be dealt with by opening the abdomen.

PATHOLOGY

IN CHARGE OF

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THE LOCAL LESION OF SCARLET FEVER.

The Manchester *Medical Chronicle* for January of this year contains a twenty-page article by W. Dowson, late senior medical officer to the Bristol Dispensary, of which the above is the title. The object of the writer is to show that scarlet fever should be considered as primarily a disease of the throat, the tonsils being first affected, and that constitutional symptoms are due to secondary absorption. We propose to give but a very short résumé of the paper, but would call the attention of our readers to it. The question is one of extreme interest, not only from the pathologist's standpoint, but also to the therapist.

The writer starts out by calling attention to the fact that, contrary to the generally accepted opinion, man has a marked natural immunity against scarlatina. His own experience as medical officer in the Bristol Dispensary enables him to speak with authority on this point, and he quotes, in addition, Whitelegge's statistics. Dowson's own observations show that under five per cent. of the population in large centres suffer from the disease. The result of investigation of liability at different ages, also, is very striking. Ninety-six per cent. of the cases occur during the age period 0-15 years. The greater portion of the remainder occurs before thirty years of age. Knowing what we do of the susceptibility of children to scarlatina, we must conclude that there is an acquired immunity after the age of fifteen years, which is not due to a previous attack of the disease.

As a result of his investigations directed to the discovery of the cause of this immunity, Dr. Dowson concludes that:

- (1) The primary lesion of ordinary scarlet fever is in the tonsils.
- (2) This disease is a local disease of these parts, and associated lymph glands, the general symptoms being caused by the absorption of toxins produced by the microbic growth at the local lesion.

(3) The incidence of the disease and the subsequent immunity are related to the structure and life history of the tonsils.

In support of the above conclusions these reasons are advanced :

In young infants, the tonsils are little, if at all, developed ; in the same class scarlatina is rare.

In scarlatina the tonsils are almost always affected ; they are not affected in the very cases in which there is a probability of local infection having occurred at some unusual point, as in surgical or puerperal scarlatina.

In cases having suffered from tonsillitis in scarlet fever, the tonsils are almost invariably found to have been much damaged ; in cases where the tonsils are found normal, scarlatina has rarely occurred.

Tonsillitis is the first sign apparent to both patient and observer ; it recurs in relapses ; its severity is directly proportional to the severity of the other associated features of the disease.

The tonsils atrophy markedly after thirty years of age, and scarlatina is found with extreme rarity after that age.

CRENATED BLOOD CORPUSCLES.

According to Holbrook (*American Monthly Journal of Microscopy*, June, 1893), crenated corpuscles are more numerous, and crenation occurs more rapidly, the more vigorous the individual from whom the blood is taken, and the better its color. Several hours pass before crenation occurs in the blood of a chlorotic, and then the corpuscles affected are comparatively few. It is a mistake to suppose that the phenomenon is seen especially in the blood of drinkers. If a layer of blood be protected against evaporation, crenation will disappear in seventy-two hours. Crenation is probably due to contraction of the network contained by the corpuscles ; and, although hematoblasts do not crenate, still their borders become irregular.

PERNICIOUS ANEMIA.

Fischel and Adler found streptococci in a case of anemia which answered both morphologically and histologically to streptococcus pyogenes. The patient had been wounded in the foot, and the wound had healed. A fever came on, which resembled more that of sepsis than pernicious anemia. The red blood corpuscles were greatly diminished. Sterilized cultures of the streptococcus were injected into rabbits, with the result that the red corpuscles diminished from 6,000,000 before the injection to 1,300,000 before death. Iron was found in the liver. The conclusion is that the products of the streptococcus induce a pernicious anemia.—*Zeitschr. für Heilkunde*, Bd. xiv., Hft. iv.

ALBUMINURIA IN HEALTH.

Flensburg examined the urine of fifty-three soldiers from eighteen to twenty-two years of age ; he found transient albuminuria in more than one-half of them. It was more frequent in the middle of the day than in the morning, and much more common just after a cold bath.—*Rev. Int. de Bib. Med.*, etc., Dec. 10th, 1893, p. 430.

JONES (E.L.) ON THE CAUSES OF CHLOROSIS.

Until the age of about fifteen, the specific gravity of blood is about the same in both sexes ; after that, the specific gravity in the female falls, while it rises in the male. In the healthy female there is, between the ages of sixteen and twenty-two, a marked fall of the lower limit of variation at a time when the mean also becomes lower. Typical cases of chlorosis all occur between the ages of fourteen and twenty-six. The lowest specific gravity observed was 1,032 in a girl aged twenty-four ; but the blood had a specific gravity below 1,037 in sixteen out of eighty-seven cases. These specific gravities are among the lowest which Jones has met with in any disease. There is no other common condition in which the specific gravity of the blood undergoes such profound alteration, and this is almost entirely due to a reduction in the amount of hemoglobin. There is a tendency to an increase of the specific gravity of the serum of the blood in the female after puberty. No such change takes place in the male. The specific gravity of the plasma is not necessarily altered in chlorosis, and the blood is not necessarily hydremic.

The writer is convinced that the chlorosis is an exaggeration of a change which normally takes place in the blood of a female at puberty, a change which, like the chlorotic condition, does not affect the blood of the male.

From the results of experiments on animals, the writer believes that there is a relation, as yet unexplained, between chlorosis and disturbances of innervation in the direction of dilatation of the gastro-intestinal vessels.

The writer then outlines his theory of the manner in which chlorosis is probably produced. In the healthy female the amount of hemoglobin is always reduced after puberty—reduced in order, perhaps, to lessen katabolism, and to lead to a storing up of tissue food, some of which is stored as fat beneath the skin, etc., and some as proteid, existing partly in the blood plasma, which, consequently, has a higher specific gravity than it had before puberty, and a higher specific gravity than is found in the male.

In the normal female there is, at each menstrual period, a dilatation of the vessels of the pelvic viscera, which does not extend to the gastro-intestinal vessels, and the blood is little altered by this condition of things.

In some females, however, the dilatation of the gastro-intestinal vessels results from shock, chill, or any of the well-known exciting causes of chlorosis. This is sometimes evidenced by disturbances of digestion, by gastric pain, vomiting, hematemesis, or melena, and it is accompanied by and may in some way be the cause of, the blood changes occurring in chlorosis.

The cases of hematemesis in which there is no actual ulceration have been sometimes regarded as instances of vicarious menstruation. If an increase of the blood quantity takes place during the inter-menstrual periods, one can readily understand why it should escape from any congested surface.

Chlorosis does not occur in males, both by reason of the fact that in males the amount of hemoglobin in the blood constantly increases after puberty, and also by reason of the fact that there is a more stable nervous system—with less tendency to these local flushings—and also because of the absence of the menstrual stimulus.—*British Medical Journal*, September 23, 1893.

THE BACTERIUM COLI COMMUNE A CAUSE OF APPENDICITIS.

G. Ekehorn makes the following summary of his investigations. The primary changes in appendicitis—the catarrh and subsequent thickening of the mucous membrane and of the walls of the appendix—are the same in degree and frequency, whether fecal matter be present or not; they are not, therefore, dependent upon the latter, and we cannot with reason infer that the presence or absence of fecal matter has any causal relation with them from our present knowledge. If we admit that virulent bacteria may, after gaining entrance within the processus vermiformis, induce these primary changes and cause a catarrhā inflammation with intense swelling, edema, and infiltration of the appendical wall, it is strictly in accordance with our experience of their behavior in other parts of the human organism. The correctness of this supposition, which may in the near future be verified by experimental evidence, has not as yet been proven.

In an appendix thus pathologically affected fecal matter may, through its presence, acquire grave secondary importance as touching the course of the appendicitis, partly through its pressure upon the edematous, infiltrated wall, in this way becoming a secondary cause of ulceration, gangrene, and perforation, and partly through diminishing the lumen of the appendix. In consequence of such swelling of the appendical wall, a narrowing is produced at each transverse flexure of the appendix. The stenosis obtains a secondary significance, analogous to that of the fecal matter.

The author seldom found pathogenic bacteria, in great numbers, in the colon. The processus vermiformis may be regarded as predisposed to

infection. The bacteria easily find in it an appropriate medium for their development, and for the exercise of their pathogenic functions.

As the various pathogenic bacteria differ as to their effects, the appendicitis will present itself under different forms. It is evident that tuberculosis and actinomycosis of the appendix, not infrequently observed, differ entirely from ordinary appendicitis.

The pathogenic bacterium most frequently found in the colon is the most common cause of appendicitis. This is the bacterium coli commune (Escherich). This bacterium may be pathogenic for man, and become virulent to a high degree; it is pathogenic for guinea-pigs and other animals used for experimental purposes.

The bacterium coli commune was present in pure culture in the contents of the processus vermiformis, in a chronic catarrhal appendicitis which was in the intermediate stage of calm, in an exacerbation of a chronic catarrhal appendicitis, and in an acute gangrenous appendicitis. It was observed, always in pure culture, in the peritoneal exudation after a perforating appendicitis, and in the pus from an intraperitoneal pelvic abscess after perforating appendicitis.

The bacteria of the colon from a chronic catarrhal appendicitis, that was, for the time being, in a state of calm, appeared to be less virulent than the bacteria from a developing or an acute appendicitis, although they were very highly virulent for guinea-pigs, which is analogous to that which has been found true in regard to the bacterium coli in normal feces, on the one hand, and the alvine discharges of diarrhea and enteritis, on the other.

This, to the author, seems to prove, with the highest probability, that it has had an important rôle to act, and has not been present as a passive element.

According to the author, it may be presumed, almost to a certainty, that bacteria are the principal disturbing factors in the acute stage of appendicitis, the fecal matter of the dilatation through retarded secretions being only subordinate factors. In all probability, the primary changes in appendicitis (catarrh and the thickening of the wall) are induced by the bacteria. —*Lakareforenings förhandlingar*, Vol. xxviii. Nos. 2, 3, pp. 113-150, Upsala, 1893.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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REPORT ON TUBERCULOSIS.

Dr. Herman M. Briggs, chief inspector of the division of pathology and bacteriology of the New York Health Department, has presented a report to the Board of Health recommending the adoption of measures for the prevention of consumption, which he officially declares to be a contagious disease. Among other things, he recommends that the Department of Public Charities and Correction be requested to set apart one of the hospitals under its charge, to be known as the Consumptive Hospital, to be used for the exclusive treatment of this disease, and that, so far as practicable, all inmates of the institutions under its care suffering from tuberculosis be transferred to this hospital.

TUBERCULOSIS AND BOARDS OF HEALTH.

At the eighty-eighth annual meeting of the Medical Society of the State of New York, held in Albany, February 7th, 1894, a resolution was adopted earnestly urging local boards of health to place tuberculosis on the list of infectious diseases, and approving the efforts of the State Board to control this disease.

PROVINCIAL BOARD OF HEALTH.

The Provincial Board of Health met in the Parliament Buildings on February 15th, Dr. Cassidy in the chair, and the following members present: Drs. Bryce, Covernton, MacDonald, Kitchen, Rae, and Vaux.

The chairman, Dr. Cassidy, delivered an address, in which he outlined the progress of sanitation in Ontario during the past year. He considered it a subject of congratulation that there were so few cases of smallpox in Ontario during the past year, considering the prevalence of this disease in England and the United States.

Dr. Montizambert, Superintendent of the Dominion Quarantine Station at Grosse Isle, who was present, was invited to address the board, and mentioned some of the methods pursued at his station for the prevention of the spread of smallpox and other contagious diseases.

Dr. Rae moved the following resolution, which was seconded by Dr. Kitchen, and carried by the board :

Resolved, that in view of the prevalence of smallpox in Europe, and the consequent danger of its introduction into Canada, as seen in the number of ships arriving in quarantine during the past season with the disease on board, and recognizing the desirability of removing this danger by vaccination or re-vaccination of crews or passengers, the board would draw the attention of the Dominion Minister of Agriculture and the Superintendent of the Dominion Quarantine to the matter of having vaccination at the port of departure made compulsory in all cases.

The secretary, Dr. P. H. Bryce, read a number of communications on questions of sanitation in various localities, which occupied the attention of the board for some time, after which Dr. Bryce read his report on "Tuberculosis in Ontario." This important subject was dealt with in the report in a very exhaustive and comprehensive manner, both as to the cause and prevention of this disease in man and animals. The report, with some slight amendments, was adopted, and was ordered to be printed. Those who are interested in the repression of tuberculosis should procure a copy of this report, as it is one of the best of recent papers on this subject.

Regulations to prevent the spread of scarlet fever were also adopted by the board.

Editorials.

BACTERIOLOGICAL LABORATORY.

AMONG the recent advances in scientific medicine, some of the most important are connected with the subject of bacteriology. While we are doing something in connection with that subject in Ontario, we are certainly not keeping abreast of the times. We learn from the *British Medical Journal* that the Hungarian Government has established a bacteriological institute at Buda-Pesth, for the purpose of giving facilities for the study of infectious diseases from the scientific point of view ; for the employment of bacteriological methods for the combating of such diseases ; for general bacteriological researches ; and for supplying information on bacteriological questions to public authorities and private inquirers.

The Government of our province is wealthy, and boasts of having a handsome surplus on hand. It is to be hoped that it will soon spend a portion of its wealth in building a large and completely equipped pathological laboratory. It would seem most unfortunate if any jealousy or rivalry between the medical schools should prevent an undertaking of such vast importance. Such an institute would certainly benefit the state. Medical students would have a chance to learn many valuable lessons in it ; but, as far as they are concerned, the work would be mostly post-graduate in character. In any event, it should be open to all. We are not without hope that something of the kind will be established in the near future.

THE ABUSE OF THE HOSPITAL SYSTEM IN GREAT BRITAIN.

THE question of the "gigantic abuse" of hospitals in Great Britain has lately been freely discussed in both the medical and lay press of that country. It is said by many that the hospital system, in both cities and towns, is grossly abused, and that, as a consequence, the public are seriously demoralized, while the hard-working doctors are proportionately robbed.

The prevailing views appear to be that such abuses should be remedied by the establishment of provident dispensaries where fixed charges shall

be paid for services rendered. In fact, such dispensaries do now exist in certain localities. The proposed or actual charges are somewhat as follows : sixpence for a consultation ; one shilling for a day visit ; five shillings for a night visit ; midwifery fee, fifteen shillings, etc.

They are now wrestling with the vexed question in Birmingham. The scheme under consideration is somewhat as follows : Two dispensaries are to be established in connection with the two hospitals in the city—the General and Queen's Hospitals—the staff of these dispensaries being entirely stipendiary. Admission to these dispensaries is to be obtained by means of tickets, to be sold at a certain rate to subscribers, who may give them to persons whom they recommend, or use them themselves if they are poor. Admission to the out-patient department of the regular hospitals is only to be obtained through these dispensaries, except in the case of accident.

The whole question appears to be surrounded by almost insurmountable difficulties. The remedies proposed appear to us to be eminently unsatisfactory. Sixpenny and twelve-penny work seems rather undignified for members of a so-called noble profession, whether it be earned in provident dispensaries, or in private practice. Our Canadian lodge practice seems to us to be bad enough ; but the British dispensary business is, if anything, one degree worse

GROSS CLEANLINESS IN OBSTETRICS.

IN our last issue we referred to the reports of the Registrar-General of Great Britain, which showed that the mortality rates from puerperal septicemia are still very high in the United Kingdom. We also quoted Dr. Boxall's views to the effect that the use of antiseptics in recent years has greatly improved the condition of matters in maternity hospitals, but that in general practice the mortality has been but little reduced as a rule, and not at all in some districts.

The *New York Medical Journal*, referring to this subject in an article entitled "Gross Cleanliness in Obstetrics," suggests the possibility that our bacteriologists and teachers of obstetrics have "overshot the mark," and have thus got above the heads of their medical students. The writer thinks it might be well, in our medical schools, to have two courses of lectures on obstetrics : the one thoroughly scientific, and the other eminently practical. In the one course, as we understand him, the students would get lessons in "microscopical cleanliness," while in the other they would receive instructions in "gross cleanliness." It is also suggested that the microscopic variety should be maintained in hospitals, or in

private cases when infection is feared, while the gross cleanliness would answer in ordinary cases in routine obstetric work.

We do not think that the terms, gross and microscopic, are exactly suitable ; but we quite agree with the idea that our schools should impart instruction in asepticism and antisepticism in both a scientific and practical way. We sincerely trust that they are endeavoring to do so now. Most, if not all, pretend that they are, and we venture to hope that they are meeting with a fair amount of success.

The subject is one of vast importance. Preventable deaths are occurring in large numbers from year to year. We hope the numbers in Canada are diminishing, but the general results are still far from satisfactory. Women die from puerperal fever, notwithstanding the supposed excellent teaching in our schools and hospitals, and the numerous and wise discussions in our medical societies. Let us continue to preach and teach ; let us work diligently in season and out of season ; let us ever press forward toward the goal of perfect cleanliness, which, after all, is the most potent barrier against septicism. Germicides are useful in a way, as adjuncts, but that is all. He who thinks that antiseptics will counteract the evil influences of dirty fingers, dirty instruments, or dirty surroundings, and acts accordingly, is a dangerous person. Yet many such there are, and much evil do they accomplish.

SHOULD PHYSICIANS CHARGE EACH OTHER FOR MEDICAL SERVICES?

THE question of payment for services to the families of brother physicians has recently been discussed by certain American medical journals. It is said that a few physicians and surgeons have adopted the custom of rendering accounts in the ordinary way at tariff prices, while others charge half the regular fees. This is in accordance with the old saying, so frequently repeated, that "business is business," which, being translated, generally means that the particular "business" referred to includes something small, or mean, or probably both. We trust that the numbers of physicians who deal with their brethren in distress on so-called business principles are exceedingly small in the United States ; we hope they are *nil* in Canada.

The old custom of helping each other in sickness and in distress is one of the most praiseworthy that has ever been known to the profession of medicine. If there be any good in us, the observance of this sort of

kindly reciprocity is likely to bring it to the surface. We believe that physicians, as a rule, give their assistance perfectly freely and ungrudgingly under such circumstances. If we are wrong in our views on this subject, we sincerely hope that no friend or enemy will ever enlighten us. But we are not wrong ; we are right. The good that is in the action has come down to us from the grandest and noblest of physicians through all ages. Let us treasure it as a sacred trust ! Let the few creatures who treat their brother physicians on strictly commercial principles be simply and silently ignored. Let us remember only the habit of the great mass of our profession, including all who are really high-minded.

Book Reviews.

THE PHYSICIAN'S WIFE ; AND THE THINGS THAT PERTAIN TO HER LIFE.
By Ellen M. Firebaugh. With portrait of author, and forty-four photo-
engravings of original sketches. In one crown octavo volume of two
hundred pages. Extra cloth, \$1.25 net. Special limited edition, first five
hundred copies, numbered, and printed in photogravure ink on extra fine
enamelled paper ; bound in half-leather and vellum cloth, \$3.00 net.
Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry
Street.

The writer of this work was invited in 1892 to read a paper before the
Æsculapian Society of the Wabash Valley, the subject assigned being "The
Physician's Wife." The address was very highly appreciated by the members
of the society, and was published in pamphlet form for distribution. On the
advice of a number of friends, the authoress decided on enlarging her paper,
and, as a result, we have this very readable and interesting book, the contents
of which relate especially to the wives of country doctors.

THE ART OF LIVING IN AUSTRALIA : Together with three hundred Australia-
n cookery recipes and accessory kitchen information by Mrs. H. Wick-
ens, lecturer on cookery to the Technical College, Sydney. By Philip E.
Muskett, late surgeon to the Sydney Hospital, formerly surgeon superin-
tendent to the New South Wales Government ; medical superintendent,
Quarantine Station, Sydney ; a senior resident medical officer, Sydney Hos-
pital. Eyre & Spottiswoode : London, Edinburgh, Glasgow, Melbourne,
Sydney, and New York.

This is an interesting book, particularly from a sanitarian point of view.
It gives a minute description of the climate of Australia, especially in reference
to its semi-tropical character. He then goes on to discuss what he calls the
"alphabetical pentagon of health," containing the five essentials, namely, ablu-
tion, bedroom ventilation, clothing, diet, and exercise, devoting a separate
chapter to each. He then describes the various kinds of food, recommending
those which he considers most conducive to health, and, in conclusion, gives a
large number of Australian cookery recipes and accessory kitchen information.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND
GYNECOLOGISTS. Volume VI., for the year 1893. Philadelphia : Wm.
J. Dornan, Printer, 1894.

We have received a copy of the Transactions of the last meeting of this
association which was held in Detroit in June, 1893, under the presidency of
Dr. L. S. McMurtry, of Louisville, Ky. The attendance was somewhat smaller

than the average, as was usually with most meetings of medical societies last summer, probably from the counter-attractions of the Chicago Fair and the Pan-American Medical Congress. Several admirable papers, however, were read, and ably discussed, and altogether the meeting appears to have been a very profitable one. We are told by those who were present that it was an exceedingly pleasant one, largely on account of the kind hospitality shown by the profession of Detroit.

Drs. Howitt, of Guelph, and Ross, of Toronto, were the only Canadian Fellows present. As we have before announced, the association decided to hold its next meeting in Toronto, in September, 1894.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. Edited by Charles E. Sajous, and seventy associate editors. Volume V. The following subjects are treated in this volume: General Therapeutics; Experimental Therapeutics; Electro-Therapeutics; Gynecological Therapeutics; Climatology; Balneology and Hydropathy; Hygiene and Epidemiology; Anomalies and Monstrosities; Anatomy and Physiology.

It is impossible to review at length the work which has been done in connection with this volume. The "Annual" is now acknowledged to be a mine of wealth in the information presented regarding the literature of medicine and allied sciences. The present volume is quite up to the standard of its predecessors, and, in some respects, surpasses former publications. A very interesting section is presented on Anomalies and Monstrosities, and a complete summary of the more important contributions to the subject which have been made during the year is detailed. In Anatomy and Physiology the review is also full, and we find here short abstracts of many important papers. We have, for instance, reference to the advances which have been made in the investigation of the anatomy of the central nervous system; a field of research which has been so prolific of late since the introduction of new and important methods of studying the minute structure of nerve tissue. We find in Physiology reference made to papers on that much-vexed question—the structure of striated muscle; and, again, an extended series of abstracts from papers dealing with the localization of nerve centres.

This volume contains the general index, which is arranged in a very elaborate fashion, and must have involved a prodigious amount of labor on the part of the compiler.

We have nothing but commendation for this work, which is singularly complete in every detail.

Medical Items.

DR. WALTER P. THOMPSON is practising in Orillia.

DR. A. H. PERFECT has taken the place of Dr. Gillespie in West Toronto Junction.

DR. W. R. GILLESPIE, of West Toronto Junction, has gone to Penetanguishene, and formed a partnership with his brother in that town.

REV. JAMES JOHNSTON, M.D., Jamaica, spent a part of February in Toronto. He delivered some interesting lectures on his experiences in his recent journey through Central Africa.

AS we mentioned in our last issue, Drs. O'Reilly and Burns, of Toronto, are away in quest of health. They remained in Atlantic City until the 24th of February, when they went to New York. After spending a few days there, they sailed for Savannah, Georgia, March 3rd.

CIGARS AND INFECTION.—Cigars smokers will probably be pleased to hear from Dr. Kerez, of Rome, that there is no danger of becoming infected with tuberculosis from smoking cigars manufactured by people who suffer from that disease. Even should such cigars become contaminated in the worst possible degree, they will not contain any infective property for a period exceeding ten days.

DR. THEODORE BILLROTH, of Vienna, died February 5th, from heart disease, and his funeral, on February 10th, was attended by immense numbers, including all sections of Vienna society. Farewell speeches were delivered at the graveside by Prof. Gussenbauer, for his pupils; by Prof. Chrosak, for the Vienna Medical Society; by Prof. Vogel, for the Professorial College; and by Freiherr Von Mundy.

MEDICAL TITLES.—In an article entitled "The Unqualified Assumption of Medical Titles," in the *British Medical Journal*, Feb. 17th, the writer says: "We have before us at the moment a circular purporting to be issued by a person with the following designations after his name: M.A., M.D. (Bc.) Eng.; M.D., LL.D., U.S.A.; Gold Medallist in Sciences, Eng.; Member of the Magnetic and Botanic College of Safe Medicine, London; late of Trinity Medical College and General Hospital, Toronto, etc." Further particulars reserved.

THE International Sanitary Conference, at Paris, has formulated a series of measures to prevent the Mecca pilgrims from spreading the cholera.—*Boston Medical and Surgical Journal*.



JOSEPH WORKMAN, M.D., C.M.

Born 1805, Died April 15, 1894.

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Original Communications.

CASE OF VAGINAL HYSTERECTOMY.

BY K. N. FENWICK, M.A., M.D.,

Professor of Gynecology, Queen's University,
KINGSTON, ONT.

VAGINAL hysterectomy is now a recognized and successful operation for a disease which, for a long time, was the opprobrium of gynecology.

Before this, the high amputation of the cervix was the best that could be done; but, sooner or later, the disease was sure to return, and, of course, prove fatal. Some even now prefer the high operation to vaginal hysterectomy, but limit it to cases seen very early, and which are not very extensive.

Vaginal hysterectomy does not always prevent recurrence of the disease, but it offers the best results, and the only hope of permanent recovery. It stands to reason that a complete operation must be more successful than a partial one, and where the whole organ with the disease is removed the chances of non-recurrence are better than when only the cervix is amputated.

The immediate mortality from the operation is small, if properly per-

formed, and the remote benefit is amply evidenced by the experience of a score of German and American operators.

The immediate dangers are from hemorrhage and shock ; the remote from peritonitis and septicemia. Pean and Richelot have done much to lessen the former by the use of clamps, which shorten the time of the operation, while aseptic methods have greatly aided in diminishing the dangers of the latter.

The arguments in favor of the clamp are the saving of time at the operation, and so lessening the danger of shock ; shortening the time of sloughing afterwards, and hence a quicker convalescence ; lessening the danger of infection, as by ligatures ; more favorable drainage ; less danger of injuring the uterus ; not so much traction on the tissues ; more firm compression, and so less danger of slipping than the ligature ; the chance of including diseased tissue which subsequently sloughs away ; and, finally, to the inexperienced the clamp offers a better prospect of success, as less skill is necessary for their application.

I think any one who has seen or done the operation by both methods would always prefer the use of clamps, although I am aware it has been urged against them that they are uncertain, may slip, and so give rise to secondary hemorrhage ; that they are uncomfortable and painful ; that they prevent proper closure of the peritoneum, and so favor septic infection and adhesions to viscera ; that the sloughing surface is larger than with the ligature ; that the wound must be disturbed in removing them ; and, finally, that the use of clamps is not as surgical a procedure as the ligature.

The following case will illustrate the steps of the operation, and some peculiarities of the method employed : Mrs. T., æt. 41, suffering from cancer of the cervix, was kindly referred to me by Dr. Saunders last September for operation. There were the usual symptoms, and I found the disease affecting the posterior lip of the cervix, while, from constant contact with the vagina, an ulcer, about the size of a half-dollar, was found on the posterior wall of the vagina about one inch below the vaginal attachment of the cervix. She was etherized, placed in the lithotomy position, and every antiseptic precaution used. Sims' speculum and lateral retractors were employed. Just before cutting, the cervix was pushed up so as to mark with the eye its attachment to the vagina. The cervix was held firmly with a strong volsellum, and drawn down, while the vaginal attachment was severed by curved scissors behind, in front, and finally at the sides, keeping close to the uterus, so as to avoid injuring the bladder or ureters. Douglas' pouch was opened, the finger passed round the left broad ligament, and the peritoneum in front incised on the point of the finger. A sound was held in the bladder as an additional precaution. The fundus

was not retroverted, nor was the introduction of a sponge necessary to keep up the intestines. A pair of Carstens' clamps was applied to the left broad ligament, and the tissues cut through close to the uterus, while the same was done on the right side, and the uterus removed. Iodoform gauze was carefully inserted between the clamps, and the usual dressing, with a T-bandage, applied. The clamps were removed at the end of forty-eight hours, the vagina gently washed out with bichloride solution (1:3000), and iodoform gauze reapplied. The recovery was uneventful, the temperature never rising above 99°, and there was no pain requiring even a single dose of morphine. In two weeks she was again etherized, the ulcer on the posterior wall of the vagina was excised, and the wound closed with catgut ligatures. This healed rapidly, and she left for home in just a month from her admission, feeling very well, and in good spirits, the parts being quite healed.

Selected Articles.

ELIMINATIVE AND ANTISEPTIC TREATMENT OF TYPHOID FEVER.

By W. B. THISTLE, M.D., L.R.C.P. LOND.,

Demonstrator of Anatomy, Toronto University; Physician to Victoria Hospital for Sick Children;
Lecturer on Diseases of Children in Woman's Medical School.

IN an article on this subject which appeared in THE CANADIAN PRACTITIONER for April, 1893, I introduced to the profession a form of treatment which seemed to follow closely upon our knowledge of the nature and *modus operandi* of the infective agent, and which in my hands had given exceptionally good results. In connection with that paper, I published histories of thirteen consecutive cases, with the average attainment of normal temperature and establishment of convalescence on the eleventh day. Another noticeable feature in that series was the complete absence of accidents of any kind, and of the usual unfavorable and distressing symptoms. Since then my experience and that of my friends who have given the treatment a trial has been such as to increase my confidence in its efficacy, and to establish, even more securely, the correctness of the views I then put forward.

I now beg the liberty of returning to the subject, and of presenting an additional number of cases. Before doing so, however, I may be permitted, as in my former paper, to outline briefly the nature and pathology of the disease, and so to clear the way for discussion.

It is now well established that typhoid fever is the condition which follows infection of the organism by a specific form of bacillus. What concerns us more particularly is the manner in which the bacillus brings about the changes which we attribute to it, for it is only from a knowledge of that kind that we can work out a successful treatment. The bacillus entering the body would, under ordinary circumstances, be carried quickly through the stomach and upper bowel until its onward course becomes somewhat retarded by the ileo-cecal valve. In this situation the intestinal

contents are perhaps most alkaline. This region is, therefore, most favorable to bacterial growth. Multiplication occurs with extreme rapidity, so that the intestinal contents in a few days teem with countless numbers of fungi. They are, however, by no means confined to the intestine, but are conveyed by the absorbents into the follicles in the intestinal wall, and through the radicals of the portal veins to the liver, and so on through the system generally. They may be found in the solid viscera, tissues, and fluids throughout the entire body. That the main culture is, however, in the intestine is borne out by the fact that immense numbers are in the evacuations, and that infection is universally attributed to unsterilized fecal matter. Keeping pace exactly with this process in the bacillus is the production and accumulation of a chemical substance—a bi-product, which is a necessary element in the vital activity of the bacillus. By separating this substance from cultures, and experimenting with it, many of its properties have been determined by Brieger, Novy, Sims-Woodhead, and others. It was found to produce local, as well as what may be called constitutional, effects. Sims-Woodhead likens it, acting locally, to a "caustic." Its first and mildest effect is to stimulate the cells of the parts, causing them to become swollen, and to increase in their rate of multiplication. If, however, the toxine is allowed to remain long in contact with the cells, or if it is in sufficiently concentrated form, instead of irritation and increased activity, the cells lose their vitality and necrosis takes place. As examples of its constitutional effect, we may instance fever, delirium, tremor, lethargy, or its mydriatic action on the pupil. If a large dose be given to an animal, it speedily dies narcotized; if a somewhat smaller dose be given, and repeated for a time, the animal gradually merges into coma, and shortly dies. The toxine is, in fact, the weapon of the bacillus, without which it would be a harmless particle of vegetable protoplasm.

The symptoms generally are determined by the amount of poison in the body, and, in the case of different individuals, by a varying degree of susceptibility, or a varying degree of virulence in the poison itself. The local disturbance is determined by the quantity of the poison in contact with the tissues, to its degree of concentration, and to the length of time it remains in contact. It is by noting these facts regarding the toxine that one gets the key to the situation. Look, for example, at the case of the intestinal follicles; why is it that the tissues here suffer to such an extreme degree? Surely not from any selective action of the bacteria, but rather from the fact that the follicles are in close proximity to the main culture, and are surrounded by lymph sinuses into which empty the lacteal ducts of the surrounding villi. Each follicle is, in fact, the reservoir to which is conveyed both poison and bacteria absorbed from the intestine. The bacteria and poison carried to other parts of the body produce, in a minor

degree, the same results. Molecular death is much increased wherever this poison is present, but, as a rule, ulceration takes place only in the intestinal nodes. The reason seems clear ; the bacilli invading the follicle are at first precisely in the same position as a similar colony in like tissue in any other part of the body, and after having given rise to a certain degree of disturbance would, as in the other situations, be overcome by the tissues, seldom giving rise to necrosis *en masse*. But the anatomical conditions being different, the lymph tissue in the intestinal follicles wages unequal war, since reinforcement both in the way of fresh bacilli and of poison absorbed from the intestine is constantly arriving, carried by the lacteals of the surrounding villi, until, eventually, the poison becomes so concentrated that all resistance is overcome, and the follicle undergoes necrosis. The slow percolation of the fluid through the follicles aids in their destruction, as it favors concentration and prolongs the period of contact.

As a corollary to this, it appears that ulceration of Peyer's patches is by no means an essential or necessary result of typhoid infection. For, if the base of supplies should be cut off, the bacteria already in the follicles might reasonably be expected to produce the same results, and disappear in the same manner as a like number of bacilli located in similar tissue in any other part of the body.

The treatment which I advocated in my first paper, and to which in the series of cases I have to report I adhered throughout, is based on this conception of the pathology of the disease. It consists, first, in eliminating, as speedily as possible, both the main culture and toxine in the intestine, and also the poison held in solution in the body fluids throughout ; second, in diluting as much as possible the toxine which is in contact with the tissues, and in that way controlling, to some extent, its destructive or irritant defects ; and, third, in the use of substances which will destroy the bacilli still remaining in the intestine, or retard their rate of multiplication.

Elimination is accomplished by securing free and thorough evacuation of the bowels daily by the use of purgatives. This daily purgation, as much as seems necessary, keeping in view the evidence of toxemia, is continued until the temperature becomes normal. There can scarcely be doubt about the possibility of clearing the intestine of the bacteria and poison which it contains. Argument to prove that point seems scarcely necessary. Since the evacuations constantly contain bacteria, and of necessity their generated poison, it follows that purgation must result in elimination of both ; and, if the process is constantly repeated, there is a continued disappearance of bacteria and poison, which would otherwise be absorbed and carried throughout the body. In fact, by the agency of purgatives there is a frequent withdrawal of an additional dose of poison,

which in the absence of any such procedure must surely have gone to increase the amount already in the tissues. But purgatives do much more than simply empty the intestine. They, at the same time, cause a copious flow into the bowel; by their use the body fluids are drained into the intestine. The amount which can be drained off in this way is very great, and, in order that we may have some idea of it, let us calculate on the basis of Lauder Brunton's experiment, by which he demonstrated that in four hours, by injecting a solution of magnesia sulphate, he was able to produce a secretion almost equal to one drachm to every square inch of intestine acted upon. But we scarcely need to enter into a calculation, as the amount of fluid which follows the exhibition of a cathartic is sufficient evidence. The important point is that the body fluids from which this secretion is derived hold in solution both the poison which has been absorbed from the culture in the intestine and that produced by the bacilli located in the various tissues of the body.

There are many somewhat indirectly beneficial results to be obtained by free elimination. The weakness of typhoid patients, which is of the same nature as the weakness of a drunken man, disappears or grows less, keeping pace to a great degree with the lessened toxemia. In a similar way, anorexia, nausea, or inability to digest and assimilate food, in every case, in my experience, grows less and less if elimination is free and continually secured. My patients have, in every instance, been able to take large quantities of nourishment, and without difficulty. Owing to the improved capacity in this respect, while, on the one hand, large quantities of fluid are constantly drained off, on the other hand this fluid is replaced by a large quantity frequently ingested and assimilated. So exhaustion from the frequent and copious evacuations is prevented. We may say that an exchange has simply been made. The body fluid with its contained poison is replaced by a like quantity without that element.

In addition to the large quantity of food taken, I invariably direct that the patient be given water in large quantities at frequent intervals, with the twofold object of aiding the elimination of poison by its diuretic and flushing action on the kidneys, and of keeping up the volume of body fluid. Thus concentration of poison is prevented, which must inevitably result if the ingestion of fluid does not keep pace with its withdrawal. By preventing this we are following the plain teaching of pathology, since the destructive effect of the poison is increased in proportion to its concentration (Woodhead). This practice of dilution is inseparably connected with the practice of free and continuous elimination by purgation.

As to the other factor in the treatment, *i.e.*, the use of antiseptics, I hold it in light esteem when compared with elimination and dilution. Yet in all my cases I have used intestinal antiseptics, and, I believe, with a

great deal of benefit. It seems to me that if one can completely deodorize the intestinal contents by the use of salol it must do this through its destructive action on the ordinary intestinal bacteria, and very likely will act in the same way on the germs of typhoid, if occupying the intestine. In this connection, I should like to point out that much larger quantities of antiseptics can be used, if associated with ³⁴¹³the purgation, without their toxic effects arising, than if given alone.

In a departure from tradition and teaching ³⁴¹⁴such as this treatment, while one may be disposed to give full credit to its logical correctness, yet there are questions which must be answered in a satisfactory manner before it can be applied with confidence. In my first paper I dealt with several of these, more particularly and at length with the supposed greatly increased liability to perforation and hemorrhage involved in the use of purgatives. Keeping in mind the pathology of the disease, let us first notice the question of perforation. This, of course, presupposes deep ulceration, a condition the occurrence of which in cases seen early, and where free elimination has been secured throughout, is directly opposed to the inferences of pathology. I have already in this paper expressed the opinion that intestinal ulceration is by no means an essential in typhoid fever, and depends upon the retention of the poison. So that in cases seen early, and where elimination has been properly secured, we are not even confronted with this difficulty, and may proceed to purge as freely at a late as at an early stage of the disease, in so far as the danger of perforation is concerned. Many cases, however, come under observation late in the course of the disease, and in these cases, where the poison has had full play, and where there are other signs of intoxication, we must suppose the presence of ulceration.

In dealing with this question I may be permitted to quote from my former paper : " Suppose the ulceration to be deep at the time the patient comes under observation, are we then to allow the caustic to continue in its work of cell destruction, or are we to attenuate and remove it in the way indicated ? Certainly, the latter plan seems the reasonable one to adopt. It is, however, objected that ulceration is, perhaps, so deep that any increase of movement, consequent on purgation, may cause rupture. Let us here notice what follows on the administration of a purgative medicine. There is increase of peristaltic movement ; but here we must remember that we have made no radical change, but have simply increased the rate of existing movement. Moreover, by purgation, we get rid of irritating matter and gases which were, perhaps, exciting violent peristalsis. And, again, it may be urged that, to accomplish this removal, we must increase the expulsive movement still further ; not necessarily so, as at that portion of the intestine, for purgatives act chiefly by virtue of

their power to produce free secretion. Consequently, the process partakes largely of the nature of a flushing out. Not only does purgation not increase, but it can be proven that it actually diminishes the danger of perforation. It is obvious ' ' at the more the intestine is distended, the thinner those structures which form the floor of the ulcer become. Now, this condition of distension is common in typhoid, and depends on paralysis of the intestinal muscles resulting from the action of the toxine on the nerve centres. Hence, if by purgation the cause of the paralysis be got rid of, there is a return of muscular tone, which is the condition least favorable to the occurrence of perforation. Let us now turn to the question of hemorrhage. Hemorrhage can, of course, only occur from a vessel laid bare by the process of ulceration. At the outset, I should like to draw attention to two facts touching arterial hemorrhage. Gowers, speaking of the pathology of cerebral hemorrhage, says : ' The force that ruptures an artery is the pressure of the blood within it.' And, again, ' Healthy veins may give way under extreme pressure, but arteries do so seldom, perhaps never.' Accepting these statements, then, and applying them to typhoid fever, we have the two factors in the production of hemorrhage—the toxine corrodes the arterial wall, the blood pressure ruptures it. If we remove the toxine from contact with the vessel, and diminish the intensity of its action, we certainly, as in the case of the intestinal follicle, limit the extent of damage to the vessel wall. But it is claimed that increase of movement in the intestinal wall may cause laceration of the exposed artery. In other words, we are asked to believe that a vessel whose wall is so fragile that it may be broken by the slight increase of vibratory movement in the membrane in which it is lodged is, at the same time, if freed from this extra movement, capable of sustaining the blood pressure. Then, again, is it really a fact that increase of movement in the intestine involves strain upon the vessel which ramifies in its wall? One can understand readily enough how the vessel might be stretched, and possibly torn, as a result of paralysis of the muscular wall of the intestine, and its subsequent distension by gas. Purgation, then, to my mind, in no case causes rupture of an artery, but at all times tends to prevent its occurrence." In case, however, one should decide against purgation, on account of its supposed danger, he must accept the responsibility which the alternative involves of maintaining *in statu quo* the very condition which makes him apprehensive of danger.

In connection with the application of the principle of elimination there are several minor questions. First, in the event of the presence of diarrhea, are purgatives indicated? The occurrence of diarrhea must be a response to some irritant, and if it continues, and is associated with evidence of toxemia, we cannot infer that there is complete elimination of the

exciting cause. In short, we simply follow the practice so general in, for example, either the symptomatic or mycotic diarrheas of children, and control the diarrhea by giving a purgative. Because there are several watery stools in a day, it by no means follows that sufficient elimination is being secured, for the flow may be simply from the lower bowel, leaving the contents of the ileum untouched. Supporting this view is the fact that the diarrhea is so often associated with indications of pronounced toxemia, whereas the same number of movements in response to a purgative is followed by a marked loosening of toxemia. With reference to this very point, a recent case is of interest. There was persistent diarrhea during the second week, associated with tympanites, elevated temperature, and intense headache. Attempts had been made to control the flux by opiates, etc., but without success. The movements were as many as fifteen and sixteen per day. I advised three grains of calomel, and asked the physician in attendance to note well the character of the motions which followed. He did so, and reported the passage of an unusually large and extremely offensive stool, together with a large quantity of a jelly-like substance. Subsequently, there was cessation of the diarrhea, and marked improvement in every respect. The purgative was repeated, and the patient became shortly convalescent. Second, is there danger of exhaustion from frequent and prolonged purgation? I have already pointed out that if patients are relieved from the poison, the appetite and power of assimilating food remain good. It is quite common to have patients take sixty ounces of nutritious food daily, in addition to large quantities of water. I have, in practice, experienced no trouble whatever from exhaustion following upon purgation.

I have now to report twenty-nine new cases, making, in all, forty-two consecutive cases. In the second series the treatment was practically the same as in the cases reported last year, with the exception that I gave myself more liberty in the choice of purgatives. I have used calomel, magnesia sulph. pil. cath. co. U.S.P., Rochelle salts, pulv. sedlitz, and cascara sagrada. Purgation begun vigorously, and continued until the temperature became normal, was the rule of treatment. It was also considered important to secure elimination as quickly as possible. I do not wait until next day; but a few hours after having given calomel or pil. cath. co., followed by pulv. sedlitz, excite the reflex by a glycerine enema. I have not noticed any difference in the effects produced by the different purgatives. All are alike useless, if they fail to purge. As to the antiseptic effect of calomel, there is not the slightest evidence. I have in several cases seen it given continuously in large doses without purging, and without producing the slightest effect on the symptoms. It is in many cases impossible to keep up purgation by the use of calomel alone. But,

if the dose of calomel be followed in two or three hours by a sedlitz powder, there is usually no difficulty. Occasionally, the gums become sore, and it becomes advisable to substitute pil. cath. co. or magnesia sulph. for calomel, or, if but slight results are desired, a drachm of elixir sagrada may be given. The difficulty has never been in the way of preventing too vigorous action, but rather in securing sufficiently free movement. In looking over my charts, I find that five or six movements per day in response to purgatives has been about the rule until the symptoms somewhat abated, when purgatives were reduced to produce three or four movements. But if there were any aggravation of the symptoms, freer elimination was induced as quickly as possible, for I considered time an important element in this treatment. Salol has been given in nearly all cases in five- or ten-grain doses every three or four hours. With every capsule or powder, the patient was instructed to take a large draught of water.

Of these forty-two cases several were furnished by medical friends who were good enough to give the plan a trial. A number of these were, however, treated under my direction. The list includes hospital and private patients, perhaps a majority of the latter.

Analysis of cases. Cases came under observation on an average on the fifth day. I have no fatalities to record. Average attainment of normal temperature and entrance on convalescence on the twelfth day. Relapse or recrudescence occurred in three cases. No hemorrhage. No perforation.

Delirium occurred in only one case—a little girl—while under treatment, and, when present when patient came under treatment, very shortly disappeared.

Tympanites in no case occurred during the course of treatment ; and where present, when the patient was first seen, very quickly disappeared.

In fifteen cases rash was noted. In seven cases spots were present on the abdomen when the temperature was normal, and convalescence had begun. Bathing was had recourse to only for the purpose of cleanliness. Routine sponging once or twice a day ; but in my own cases never required for the reduction of temperature.

Remarks. Forty consecutive cases of typhoid fever, without death or accident of any kind, is an extremely good result. And when we consider the duration of the fever and the comfort of the patient, instead of the usual distressing symptoms, this record is without a parallel, I believe, from any system of treatment. The fact that, in seven of this series of cases, the rash, perfectly typical, was coincident with normal temperature and convalescence surely proves that typhoid fever can be aborted.—

Medical Record.

NON-OPERATIVE TREATMENT OF PERITONITIS.*

BY FREDERICK TREVES, F.R.C.S.,

Surgeon to and Lecturer on Surgery at the London Hospital; Examiner in Surgery, University of Cambridge.

BEFORE dealing in detail with this matter, a very brief reference may be made to the treatment as carried out in bygone years. Inasmuch as peritonitis, as an individual disease, was not recognized until the beginning of the present century, even the most elaborate review of the subject cannot extend very far back.

An excellent account of the treatment of the disease, as practised in England eighty years ago, is to be found in a gossiping tract on *Peritonitis*, by Thomas Sutton, M.D., late Physician to the Forces, and Consulting Physician to the Kent Dispensary. His lines of treatment were as follows: first, absolute rest; second, purgatives; third, abstinence from food; fourth, cold to the abdomen; fifth, blood-letting in the acute cases; and sixth, opium to be given only occasionally and very sparingly. Dr. Sutton was not a believer in opium in peritonitis, except in the presence of intense pain. He made a great point of securing an action of the bowels when possible, and made frequent use of sulphate of magnesia. Benjamin Travers, writing in 1812, advocated the same measures. He considered an evacuation of the bowels to be a matter of primary importance, but he appears to have relied largely upon enemata, and to have inclined towards warm fomentations.

I. REST.

Absolute rest in the recumbent position appears to be the first obvious indication. The knees may be flexed over a pillow to lessen the tension on the abdominal walls, and to favor the patient's instinct to assume that posture. The upper part of the chest and the ever-restless upper limbs should be protected by a woollen jacket, and no reasonable restraint offered to the patient's inclination to hold the hands above the head. This favorite posture, by acting upon the lower part of the thoracic wall, assists

*Abstract from Lettsomian Lectures on Peritonitis, delivered before the Medical Society of London, January, 1894.

also in diminishing the tension within the abdomen. It is cruel to insist that the hands should be kept beneath the bedclothes. The state of misery in peritonitis is acute enough without being increased by purposeless and rigid formulæ. Cold hands do not cause death, but as on exposure they tend to become cold they should be covered up. The wretchedness of restlessness has a natural relief in little movements.

II. FEEDING.

The old rule of eighty years ago of giving as little food as possible by the mouth cannot be improved upon. The stomach is not in a condition to receive nourishment, and what is taken usually remains unutilized, and is returned unchanged. The practice sometimes met with of laboriously plying the patient with teaspoonfuls of this meat extract or of that recalls the legend of the Danaïdes, who spent their energies in pouring water into pitchers without bottoms. Two extremes are to be avoided: The first is the rigid, unreasoning, and often needlessly cool prohibition of food of any kind by the mouth; and the second is the reckless and intemperate use of ice or iced fluids.

Thirst is often a most terrible symptom in peritonitis. It is not always quite relieved—at first at least—by rectal injections. The patient is ready to give his life for a drop of cold water. If he takes it he is sick, but he is much relieved. This little indulgence does not introduce anew the symptom of vomiting; it is there, but it is latent, and the drop of cold water only makes it evident. The patient will not die of vomiting, and simply because a rigid exclusion of all fluid by the mouth does not render the symptom apparent it does not render it non-existing. The man would sooner vomit than endure his thirst. Very often great relief is given by allowing a fairly copious draught of fluid, which is soon rejected, and which—as it were, by washing out the stomach—leaves the patient for a while infinitely comforted. On the other hand, the perpetual sucking of ice is as bad as the perpetual teaspoonful of useless jelly or decomposable meat juice. The filling of the stomach with iced water does undoubtedly add to the general depression of the patient, especially when vomiting has been brought into abeyance by morphine.

The right course appears to lie between these two extremes. There should be no rigid formula except this—let the patient take as little food as possible by the mouth. If there be a raging thirst, let him have a little ice—and very little suffices—or a little iced milk and soda water; or if, as is common, the inclination lies towards something warm, let him take a few spoonfuls of hot water or of weak tea made hot, or of beef tea at a like temperature. It is not the nourishment that is needed (and I imagine that the nourishment in beef tea is merely an ancient but cherished fiction),

but some fluid in the stomach. It is better, within reasonable limits, to be guided by the patient's own instincts than by a blind formula founded upon a doubtful physiology. This same physiology has added very much to the miseries of death from peritonitis.

As regards actual feeding—in the usual sense—that should be carried out by rectal injections. The injections should be small in amount, should be weak, should be made of some peptonized meat extract or infusion, should be given slowly, and should be of the temperature of the body. An injection of two to two and a half ounces of peptonized beef tea with half an ounce of brandy appears to answer well, and may be given every three or four hours. Thirst is better relieved by an injection of half a pint of warm water, given alone, than by diluting the nutrient enemata to that extent. I do not think that nutrient suppositories are so well suited for cases of peritonitis as is the ready-made fluid injection. Irritability of the rectum may be, to some extent, met by washing it out now and then, and by a weak injection of cocaine. In the more advanced cases, the sphincter begins to relax as the loss of power progresses, and then, very usually, nothing can be retained. It is undesirable to harass the last hours of a dying man by nutrient enemata, simply because it is the custom.

If there be diarrhea, or if the bowels be acting freely, then rectal feeding cannot be adopted; but, fortunately, in these cases the vomiting is slight, as a rule, and fluid and a certain amount of nourishment can be taken by the mouth. It is, perhaps, needless to add that in cases, with or without diarrhea, in which there is no vomiting, all that is given may be given by the mouth. Much complaint is often made by patients with peritonitis of the horrible state of the mouth. The tongue is dry and stiff, and such sense of taste that remains is only capable of appreciating a bitter nastiness. Something can be done to relieve this by keeping the teeth brushed, by washing the mouth out with a 1 in 80 carbolic lotion, or with a mixture of eau de Cologne and water, by actually cleaning the tongue and by keeping it moist with glycerine and water.

III. OPIUM.

Here, again, the old practice appears to be the best. Give as little opium as is possible. In the early stages of acute peritonitis, and especially in the perforative forms, and in those depending upon appendix troubles, morphine in the form of a hypodermic is absolutely necessary. In the worst instances it may certainly avert death from shock. Under its influence the patient revives, and the more intense symptoms become greatly modified. Morphine should never become a feature in the routine care of peritonitis. It masks the symptoms, hinders the natural process of cure, and hampers treatment. The indication for it is actual pain, and

not mere restlessness and misery. In the really septic forms very little morphine is called for, and often none at all. Its evil effect in the after-treatment of cases of abdominal section has been amply demonstrated. In quite hopeless cases there can be no objection to its free employment, but in other instances the administration and the dose of the drug must be sanctioned and measured by one symptom—pain.

I have noticed that in those who are dying of general peritoneal sepsis a greater sense of relief usually follows the hypodermic injection of strychnine than attends the use of morphine. The strychnine appears to act as a stimulant would—the patient revives for a while and feels more hopeful under its influence, his moanings cease, his miseries are less unendurable, and for the twentieth time he thinks he may get better.

IV. APERIENTS.

At the commencement of the century, the use of aperients was a necessary element in the routine treatment of peritonitis. By aperient treatment may be understood the obtaining of an action of the bowels by either drugs or enemata. After a certain number of years the practice altered, and the dictum went forth that when any signs of peritonitis were present aperients were to be absolutely forbidden.

Within the last few years the more ancient method has been revived, but it has been revived with very radical modifications. To Mr. Lawson Tait the profession is indebted for this return to an almost forgotten practice, and, above all, for the employment of that practice with the new element of discrimination. Mr. Tait's measure has been frequently spoken of as "the treatment of peritonitis by aperients," and it has been assumed by some (and probably with disaster) that a purgative is necessary in every case of peritoneal inflammation. Mr. Tait's precise words on this subject are as follows:—"I have never said that the purgative treatment will cure peritonitis, for peritonitis, once if it is completely established, is a practically incurable disease, and almost uniformly fatal." It is on this very point that the centre of the position with regard to this treatment turns.

Aperients can never be adopted in the routine treatment of peritonitis. In the larger proportion of cases this measure is entirely useless, and in the great series of the septic forms it is more or less impracticable. In most of these septic examples enemata of any kind may be administered, and purges of any character may be given, and the probability is that the bowels will not act at all, and if they do respond it is more than probable that the treatment will not affect the prognosis in the least, and certainly not in the patient's favor. If the aperient could eliminate the fatal poison which is circulating in the patient's system then good may follow, but even the most enthusiastic advocates of purging cannot credit their drugs with this power.

There is no doubt but that there is within the intestine an amount of noxious or poisonous matter which remains harmless so long as the viscus retains its normal condition, but which may lead to septic symptoms if certain changes are induced in the wall of the bowel, or possibly in its contents. This has been especially shown in connection with the potentialities of the colon bacillus, and it is clear that these noxious elements include not only simple chemical substances, but also various micro-organisms and their hurtful products.

Some gross disturbance in the complex mechanism of the bowel wall is needed to render the poisonous contents of the intestine acutely poisonous, and to favor its ready introduction into the system. Of the effect of a thorough evacuation of the alimentary canal in such an instance surgical experience can testify. Such a case as the following must have come within the knowledge of every surgeon who has dealt with many cases of intestinal obstruction. Some years ago I was called to see a vigorous man of forty-five who had suffered from acute intestinal obstruction for some three days. I opened the distended abdomen, and I recognized that peculiar faintly-stinking peritoneum with which such operations soon make one familiar. Immediately beneath the incision was revealed a single omental band which had caused the trouble. This was divided and the abdomen was closed. The operation lasted a few minutes. Still the man died, and the necropsy revealed no perforation and no gangrene of the bowel, and no abnormal change in the peritoneum save a little stickiness. The patient died, not because his bowels were obstructed, but because that obstruction allowed septic matter to be absorbed from his intestine. His trouble was not outside his bowel, but within it. Had I made an opening in the gut and allowed the poison-loaded viscus to relieve itself, the result may have been different. Such an operation would have been comparable to the washing out of the stomach after an active poison has been swallowed.

It is a fact that the most successful treatment of acute obstruction of a certain grade is that which provides for a thorough evacuation of the loaded gut. A blindly-executed enterostomy, with an utter ignoring of the cause of the obstruction, has been attended by better results than have operations in which the agent of the obstruction has been discovered, after elaborate search, and has been satisfactorily dealt with. This treatment of acute obstruction, by the evacuation of the bowel before all things, we owe to Benjamin Travers, the father of intestinal surgery. In cases of strangulation of a certain degree he insisted that the bowels should be cut into and emptied, even after the obstructing band had been removed. He considered that the operation was not complete until this had been done; he urged that safety was only to be obtained by an evacuation of

the gut, and he supported his views by numerous cases and experiments.

Another illustration of these selfsame points is afforded by perityphlitis. In a previous section of these letters I have shown that those cases of perityphlitis in which there is diarrhea, or in which the bowels act naturally or under the influence of aperients, are attended with a much lower mortality than are the cases in which constipation is marked. In my own experience, I am convinced of the value of the aperient treatment in the earliest stage of these cases, and of the pursuit of the same measure throughout in selected instances. In some cases, however, nothing within reason will bring about an action of the bowels. The subjects of repeated attacks of perityphlitis are aware themselves of the evil effects of constipation, and many of them have learnt that they can ward off an attack, or minimize it, when it comes, by a prompt aperient.

A further illustration of the subject, from the same standpoint, is afforded by that alarming intestinal condition which is sometimes met with after abdominal operations, and which was at one time spoken of as peritonitis. The exact nature of this condition was, I believe, first recognized by Dr. Malcolm. It has been fully dealt with subsequently by Olshausen and Verchère. The former writer has applied to it the convenient name of "pseudo-ileus." The symptoms are these: On the second or third day after a not necessarily severe abdominal operation, the abdomen becomes distended, the patient becomes uncomfortable, and complains of "wind." The distension increases; vomiting sets in. At first only the contents of the stomach are rejected; very soon the matter becomes bilious, and finally there is copious "coffee-grounds" vomiting, and this may present a feculent odor. The vomiting tends to become worse and worse, and is much more copious than is common in peritonitis. The pulse becomes smaller and feebler, the temperature usually sinks, and exhaustion increases with alarming rapidity. On the fourth or fifth day after the operation the patient may die. At the necropsy the peritoneum may be found to be practically unchanged, or to exhibit so trifling a degree of peritonitis as not to account for the symptoms, nor for the fatal result. Various explanations of this condition have been given. There is no doubt that the nervous disturbance which attends any abdominal operation leads to some degree of intestinal paralysis. This paralysis, attended, as it is, by vasomotor changes in the bowel wall, is favorable to the absorption of septic matters from the intestine. The paresis may be slight and may disappear spontaneously, or it may subside if the distension of the bowel can be relieved by the introduction of a rectal tube. If it persist, it appears to permit of a filtration through the intestinal walls of septic materials, of bacteria or of their products. These latter are readily taken up by the peritoneum, and a septicemia commences. This is the explanation given by

Olshausen, Verchère, and others, but it is not accepted by Dr. Malcolm. Anyhow, it was pointed out by Mr. Tait, and has been made evident to most surgeons who have followed his teaching, that if an action of the bowels can be obtained at the outset of the symptoms, either by the administration of a purgative or by an enema, the trouble, in a large proportion of cases, passes away, and the patient makes a good recovery. It cannot be said that this good result follows in all cases, and it is evident that the purgative, like the emetic given in acute poisoning, can only bring about an arrest of the symptoms within certain limits.

On both theoretical and clinical grounds, the thorough emptying of the intestine before any abdominal section is performed may be regarded as absolutely essential.

V. BLOOD-LETTING.

This measure of treatment may, with advantage, be more extensively employed. It is no longer likely to be used in the unreasoning and mechanical fashion of bygone days. In robust forms of localized peritonitis, blood-letting is attended with admirable results. In perityphlitis, the application of half a dozen leeches often acts with magical effect. In the older accounts of the treatment of peritonitis by bleeding, no good appears to have followed in cases in which the inflammation was diffused, except, perhaps, in some examples due to injury. On theoretical grounds, this is precisely what would be expected.—*British Medical Journal*.

[Mr. Treves' remarks on the operative treatment will appear in our next issue.—ED.]

Clinical Notes.

TWO CASES OF DIPHTHERIA TREATED BY ALKALINE SOLUTIONS OF HYDROGEN PEROXIDE.

By W. B. THISTLE, M.D., L.R.C.P. LOND.

FOR a time peroxide of hydrogen came into very general use as a local application to the throat in diphtheria, and had almost supplanted other local medication. But after a time it was noticed that the number of cases in which laryngitis occurred was much increased, and that, in many cases, while the thick membrane disappeared, there still remained either a very thin film, or a much-reddened and irritable condition of the parts. In many instances the burning and pungency of the solution was complained of. This irritating tendency of the peroxide was conceived to be a source of danger, inasmuch as an irritated and inflamed larynx offered a favorable soil for the growth of the neighboring bacilli, should they happen to be transplanted. Moreover, a simple laryngitis, occurring in this connection, was a cause of much anxiety. This, together with other disagreeable features mentioned, led to a very extensive abandonment of the peroxide in the treatment of this disease. However, since it is undoubtedly a most powerful germicide, and, moreover, is not poisonous, it seemed to Dr. Lewis Smith, of New York, a pity that so valuable an agent should fall into disuse. With the assistance of Squibb, the chemist, he undertook to do away with the irritating properties without in any degree interfering with its germicidal action. He found that, as sold, the substance is acid, and in many cases highly so, and to the acidity is ascribed the irritating properties. It is necessary, in order to handle and keep the fluid, that it should be acid. But, if the solution is rendered alkaline, although it cannot be kept, yet, if used at once, it is as destructive to germs as ever. He, therefore, recommended that two solutions should be kept at the bedside; one of the undiluted peroxide of hydrogen; the other, soda bicarb., grs. v. to 3i. Equal parts were placed in the spray and at once used. A fresh solution to be again made for the next application. Litmus used to determine reaction.

I have recently treated two pronounced cases of diphtheria, occurring in the Victoria Hospital, after this method, to my entire satisfaction.

CASE 1. C. G., æt. 11 years. Pharynx, soft palate, and tonsils were covered with a thick, grayish-white membrane. The tonsils were much swollen and the surrounding tissue red and angry-looking. Headache, coated tongue, with moderate elevation of temperature; no albumin; knee-jerk present; Klebs-Loeffler bacillus in membrane.

Treatment. Alkaline peroxide of hydrogen to be sprayed on throat every hour, excepting hours between 10 p.m. and 6 a.m., when the spraying was done every two hours. Free purgation by dose of calomel daily. Acid nitro-mur. dil. and liq. strychnia mixture every four hours. The throat was quite clear on the third day, and entirely without the red and irritated appearance usually seen after so frequent application of a strong solution.

CASE 2. Winnie B., æt. 6. Throat covered with thick membrane, especially thick over tonsils, posterior pharyngeal wall, and over posterior surface of uvula. The necrosis was deep, and there was decided tendency to hemorrhage. No albumin; no loss of knee-jerk; temperature moderately elevated; coated tongue, and headache. Klebs' bacillus in membrane.

Treatment as in first case, but it was more difficult to satisfactorily spray the throat. There was, however, improvement at once and continued, and in five days the membrane had completely disappeared. In her case also there was no sign of irritation.

There seemed to be as much gas given off with the alkaline solution as with the acid. I used the solution on my own throat, and can vouch for its mildness. I also, from personal experience, can testify to the pungent, irritating qualities of the ordinary solutions.

The peroxide, as received, was decidedly acid.

CASES IN PRACTICE.

BY B. E. MCKENZIE, B.A., M.D.

CASE 1. Deformity of leg and foot, the result of osteomyelitis. W. H., male, æt. twelve years. When two years old, had some inflammatory affection involving left leg. Pus formed, and incision was made near the ankle. At varying intervals, during the next year or two, operations were performed on the leg. The front of the leg is now marked by cicatrices extending more than half way to the knee.

There is deformity, as seen in Fig. 1. The lower end of the fibula extends about two inches lower down than that of the tibia, and is strongly bent inward, so that the foot is placed much inward from the direct line of transmission of the weight of the body through the leg, and, in walking, the external malleolus comes nearly to the ground. As age and weight increase, the lameness and pain in walking are increasing, because (1) the boy is becoming heavier, and (2) the deformity is growing worse.

There seems little doubt that, in the course of the disease, the growing section of the tibia, at its lower end, was so affected as to prevent further growth at that part. Consequently, the fibula continuing to grow the foot was shoved inward, and the fibula, chiefly, and the tibia to a less degree, forced into a curve at their lower extremities.

Admitted to the Victoria Hospital for Sick Children, December, 1891.

Operation. Excision of one inch of fibula, the lower section being made about three inches above the tip of external malleolus. An attempt, then, to place the foot in a correct position by manual force failed, and a section was made through the tibia one and a half inches from its extremity. The foot was then easily placed in position, but the lower fragments of the bones were found to be too far apart to permit of correct adjustment and coaptation of the upper fragments. The adjustment was so made as to permit the upper fragment of the tibia to be slightly outward of the lower, but having about half the cut surfaces in contact, while the upper fragment of the fibula lay inward of the lower, and not in contact. These fragments, however, were connected by a bridge of periosteum, which had been carefully preserved when the exsection of a portion of its shaft was done.

Next, the lower epiphyseal cartilage of the fibula was removed, in order that the deformity might not recur.

Careful asepsis was observed, iodoform dressing applied, and plaster of Paris employed to retain parts in position. No sutures, nails, or other method of direct fixation of fragments. Dressings not removed for three weeks, when wounds were found healed. Plaster of Paris again applied. Allowed to walk in March, three months after operation.

February, 1894. It is now a little more than two years since operation. There is no increase of deformity, and about two inches of shortening. Walks with a cork sole $1\frac{1}{2}$ inches high, having scarcely a perceptible limp.



FIGURE 1.



FIGURE 2.

TALIPES CALCANEUS.

CASE 2. Infantile paralysis.* Tendon anastomosis. H.B., male, æt. eleven years. History incomplete. Lame from childhood, but not from time when he first walked. Left leg in all its parts is smaller and weaker than the right, but the paresis is most marked in the internal and extensor muscles of the foot. (Fig. 2.) The gastrocnemius, soleus, and

*CANADIAN PRACTITIONER, March, 1893, p. 227.

posterior tibial muscles are powerless. The flexor longus digitorum, flexor longus hallucis, tibialis anticus, and peronei are active. The latter muscles are displaced one inch forward from their normal position behind the external malleolus.

Operation. An incision was made, extending three inches directly over the tendo-Achillis, which was found to be a mere fibrous cord about the size of a lead pencil. The tendon was split, the incision being continued down to the calcis. The tendons of the peronei were cut subcutaneously in front of the external malleolus, and the proximal portions drawn out from their sheaths were stitched into the tendo-Achillis, being drawn into the split and down to the os calcis. The tendon of the flexor longus digitorum was reached by dissection from the first incision, cut and sutured with the peronei. Silkworm gut was used in suturing the tendons.

Healing was satisfactory, and, three months subsequently, walking is much improved. He has increased power of raising the heel, though not sufficient to enable him to sustain his weight by raising the heel from the floor. His improvement in walking is not due entirely to the added power of raising the heel, but partly to his having a boot with two inches of cork sole to make up for the shortening, and raised higher at the inside, and also projected inward so as to prevent the inturning of the internal malleolus. Wears no brace now, and walks much better than formerly, when a brace was worn.

CASE OF CARCINOMA OF THE PYLORUS, WITH CICATRIX
OF AN ULCERATION ELEVEN YEARS PREVIOUS.*

BY DR. MACCARTHY,
BARRIE, ONT.

J. C., æt. 62, medium build, anemic. *Previous history*.—About eleven years ago I was in attendance on this patient for a very copious hemorrhage from the stomach. The amount vomited was large, and continued for three days. There was also a large amount of blood passed with the alvine discharges. The attack was sudden, with no previous history except a mild indigestion. There was no pain. The patient was left in a state approaching collapse. He, however, rallied, and had his health fairly re-established, until about two or three years ago he again commenced to complain of indigestion. He was an inveterate smoker. The symptoms of dyspepsia continued to increase until, about nine months before death, he commenced to complain of pain, more or less constant, two or three hours after eating. This pain was chiefly at the pit of the stomach, extending to the left side. Pressure over the pylorus did not cause pain during the progress of the case. Vomiting set in, and eventually became a constant symptom. Towards the end the vomited matters were often coffee ground. Passages per rectum were also often black, and that, too, when bismuth was not exhibited. Edema of both legs as far as the knees occurred during the last month, and during this stage also the temperature rose to about 101°. Albumin was not detected in the urine, though looked for on four or five occasions during the last fortnight.

The revelations of the *post mortem* were a rather large flabby anemic stomach, with an annular thickening around the pylorus, lessening its diameter, but not, by any means, closing it. This thickened condition extended some little distance from the pylorus, gradually merging into the more healthy tissues. There was no break of continuity of the mucous membrane in any part that could be distinguished, but there was a cicatrix situated on the posterior wall near lesser curvature, which I take to be the site of the ulcer of eleven years ago.

*Read before the Pathological Society of Toronto.

All the remaining organs of the abdomen were healthy, except the liver, which was enlarged generally, and in the middle lobe had two hard nodules about the size of hazel nuts.

I have seen it stated somewhere, but I have not been able to put my hand on the authority, that an hemorrhage of the character above described followed several years after by cancer is merely a condition of cancer lying dormant, and remembering this, and having, as I thought, a case on all fours with such a description, I thus spoke of this case, and had I not succeeded in obtaining a *post mortem* would have had my belief confirmed ; but the cicatrix in this case being perfectly free and separate from the portion involved in the cancerous condition, it is quite evident that the cancer was only a recent development, and that the previous ulceration was merely one of a simple character.

TUBERCULAR TESTICLE.

BY GEORGE A. PETERS, F.R.C.S. ENG.,

TORONTO.

THIS specimen is one removed by Dr. Cameron and myself from a young man, æt. 19 (?). He was otherwise in good health, but had a tubercular family history. The other testicle was not at all, or but very slightly, affected. During life the enlargement, which was considerable, could be felt to be due almost entirely to deposits in the epididymis. There was no collection of hydrocele fluid, but the vas deferens was very distinctly enlarged, as is almost invariably the case in this affection. There was a very narrow sinus, discharging a small amount of watery pus, leading down to the epididymis at one point. An elliptical portion of skin, including the mouth of this sinus, was removed with the testicle, and is seen in the specimen. The duration of the diseased condition is uncertain, but it had existed for at least a year, and probably considerably longer.

On making a longitudinal section through the organ, it is found that, while the testis itself is not decreased in size, the epididymis is enormously enlarged, being the seat of large, bossy, caseous, nodular masses, which are distributed throughout the globus major, body, and globus minor, forming a crescentic mass which almost encloses the testis, and forms by far the greatest proportion of the whole organ.

Some of the craggy nodules in the epididymis are completely caseous, but the majority present caseous matter in small patches only. A somewhat remarkable feature of the specimen is that the body of the testis, while not enlarged, appears to be almost uniformly infiltrated by young gray tubercles about the size of sago grains. None of these, however, show any signs of caseation. The vas deferens is thickened to about three times its normal diameter, and, on section, a small quantity of yellowish, creamy matter may be squeezed from its lumen. The tunica vaginalis is adherent, at some points, to the testis, but there is no collection of hydrocele fluid.

In contradistinction to syphilitic deposits, tubercular nodules have a preference for the epididymis rather than the substance of the gland, but, in young subjects, transparent gray tubercles of small size may be found in the testicle itself, especially in the neighborhood of the corpus Highmore. Indeed, so rare is it to find tubercular disease of the testicle without some affection of the epididymis that Virchow has only observed one such case among adults, and one in a child of three and a half years. Tubercular infection of the testicle may occur at any age, but is much more frequently observed in subjects from fifteen to thirty-five years. Mr. Thomas Jones, however, showed, at the Manchester Medical Society, a tuberculous testicle removed from a child fifteen months old, who was also the subject of spinal caries. In this instance the body of the testicle alone was affected, the epididymis being free from disease.

In thirty *post mortems* made by Reclus upon men suffering from tuberculosis of the genital organs, he found deposits in the lungs in twenty cases, but only two per cent. of phthisical men were found to suffer from tuberculosis of the genital organs. The testicles are also frequently affected in spinal caries.

It appears certain that tubercle never exists long in the testes without a concurrent affection of the vasa deferentia, vesicular seminales, prostate, and bladder, and the disease frequently spreads to the kidneys before death ensues.

There appears to be an extraordinary difference of opinion among authorities of repute regarding the starting point of the disease. Nepven holds that miliary tubercles spring from the tunica adventitia of the blood vessels. Carling maintains that the disease is originally developed within the tubes of the testicle, abnormal nutrition in the cellular contents of the tubes inducing the formation of miliary tubercles in their walls. Malassez also declares that an affected tube, when drawn out, carries with it the granulation deposit which causes a symmetrical enlargement of the tube. Dr. Justus Gaule claims that tuberculosis of the testicle commences as a catarrh of the seminal tubes of the epididymis, and spreads thence to the testis. The nodules or tubercles, according to this authority, are formed of groups of seminal ducts plugged with the products of catarrhal inflammation, and tend to undergo caseous degeneration.

Rindfleisch, on the contrary, maintains that in tuberculosis the change is altogether interstitial, the tubuli seminiferi remaining quite passive. He holds, with Kundrat, that the tubercle cells arise chiefly from the proliferation of epithelium, especially of the blood vessels and their sheaths, and of lymphatic vessels.

SURGERY OF THE GALL BLADDER.

A FURTHER SERIES OF CLINICAL REPORTS.

BY JAMES F. W. ROSS, M.D.,

Lecturer in Gynecology in the Woman's Medical College ; Gynecologist to St. John's Hospital, Toronto General Hospital, and St. Michael's Hospital.

CASE I. Mrs. L., æt. forty-seven. Married for twenty-eight years, and the mother of four children. First noticed pain in the right side fourteen years ago. After a sudden severe onset of pain, she noticed a lump in the right side ; it has not grown since that time, but has recently become more painful.

On examination in June, 1892, I discovered the lump of which she spoke, and diagnosed it as a distended gall bladder. It was rounded and smooth, with lateral movement across the body and no movement from below upwards, rotating from a pedicle above. She complained of a stinging pain in the part, that came on at varying intervals. I advised laparotomy for the removal of a gallstone that I felt sure was obstructing the cystic duct, but the patient passed from my hands and was lost sight of.

In February, 1894, she again presented herself, stating that she had now come prepared for operation, having tried all sorts of remedies in the interval. On referring to my notebook, and again examining the case, I found the condition identical with what it was when she was first seen.

Operation February 15th, 1894. I made an incision just below the ribs on the right side through the rectus muscle, and brought the gall bladder into the wound. This is the incision I have invariably used in my later cases for the removal of gallstones. The gall bladder was then punctured with a trocar, and about a pint of clear, unstained mucus removed. This decolorization immediately indicated the long-continued impaction of a stone in the cystic duct. In cases of recent impaction this decolorization is never seen. I removed two gallstones free in the gall bladder, and found a third firmly impacted in the cystic duct. After a great deal of difficulty I was able to enucleate the stone from its bed, in

which it had become encysted, just as a stone is found encysted in the wall of the urinary bladder. Considerable bruising of the tissues was unavoidably produced during these manipulations. The stone slipped out from a bed, leaving behind a roughened, thickened surface, just within the mouth of the cystic duct. The gall bladder was then fastened to the wound, and the deep stitches were inserted. As soon as the stone was removed from the cystic duct, bile began to flow through the gall bladder, and the dressings were saturated with it from the very first.

On February 27th, I found pus discharging from the gall bladder, and instituted daily washing by means of a small catheter. This was passed well up to the cystic duct, and a stream of water was allowed to flow until it came out quite clear. Flakes of mucus mingled with purulent discharge were thus forced out of the gall bladder through the external wound. Boracic acid solution was used to disinfect the cavity. This suppuration of the gall bladder is something unusual, but no doubt occurred in this case on account of the violence required to enucleate the encysted calculus. The purulent discharge soon ceased, and the patient is now, at the present writing, in the best of health. The sinus has completely closed within the last three or four days.

During the first week slight jaundice set in, caused, no doubt, by the absorption of bile through the ulcerating surface at the site of the impacted stone.

CASE 2. Mrs. C., æt. about thirty-five. Had been suffering for nearly two years with periodical attacks of jaundice, chills, and fever, and almost constant pain. The pain was of a paroxysmal and spasmodic character, and was referred to the neighborhood of the gall bladder. The first onset of the pain was sudden. From the nature of the pain and the symptoms, I concluded that there was impaction of a stone in the common duct, and that the jaundice was produced by the plugging up of the duct at the sides of an irregular calculus by a mucous secretion ; that after the washing downwards of the mucus, sufficient bile was able to escape to relieve the jaundice. Bile was found in the urine at the time of the attacks, and the stools were clay-colored. As the patient was in a wretched condition of health, I advised operation.

The operation, on March 19th, was the most difficult that it has ever been my lot to perform ; it consumed about four and a half hours of time. The omentum was found adherent to the under surface of the liver, and this had to be separated before the gall bladder could be brought into view. The gall bladder was very much contracted and empty. Three stones could be felt in the common duct through the dense adhesions. Owing to the adhesions, it was impossible to outline the duct accurately enough to warrant incision for the purpose of removing the stones. Dur-

ing the separation of the adhesions, the duodenum was slightly torn. I then considered it advisable to open the duodenum further and endeavor to remove the stone through the gut, but this could not be accomplished. After opening the duodenum, the exact position of the duct, deep among adhesions, could be made out, and direct incision into it was made. One stone was found near the opening of the duct into the duodenum, surrounded by a granulating cavity covered with crumbling, phosphatic matter, just as we often see the urinary bladder covered with phosphates when inflamed. The remnants of the stone were pushed on into the duodenum by means of a director, one faceted and smooth stone was removed, and, during the manipulations, another small stone slipped back into the gall bladder, and could not be again reached. The flow of bile was now free through the duct. The duodenum was stitched carefully by Halstead's sutures, so that the peritoneal edges were brought into accurate approximation. The common duct was also stitched, but, owing to its friability at the part lately occupied by the roughened, phosphatic deposit, it was impossible to prevent a small leakage of bile. The leakage was, however, very slight, and, had it remained so, would probably have done but little harm. A drainage tube and iodoform gauze packing were inserted to the bottom of the pouch left after the separation of the adhesions, and the wound closed in the ordinary manner.

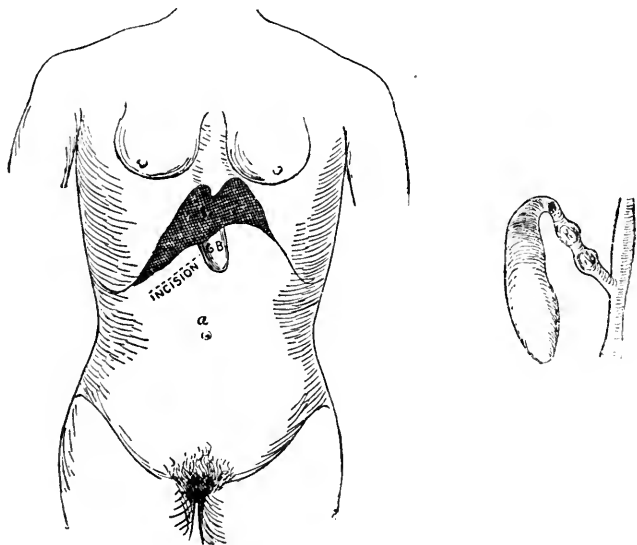
The suturing of the common duct was done as carefully as hands could do it, assisted by intestinal suture needles and a trained assistant. Hiccoughing set in within an hour of the termination of the operation. During the severe vomiting and violent hiccoughing I fear some stitch in the duct must have torn loose, as the quantity of bile issuing from the drainage tube became suddenly augmented. The pulse became rapid, and the patient died, with all evidence of combined peritoneal irritation and shock, about fifty-six hours after the operation.

Incision into the common duct must always be attended with greater risk than simple incision into the gall bladder, because the walls of the common duct are apt to be friable and degenerated, owing to the long-continued presence of an impacted stone. All stones that have lain in contact with the walls of either the common or the cystic duct appear darker in color and rougher on the surface than those that lie in the gall bladder. The surface of such stones is honeycombed, as if parts were dissolved by the action of fluid poured out around them as a consequence of the irritation produced by their presence.

CASE 3. Miss E., æt. twenty-four. Three years ago, while calling on a friend, patient was suddenly attacked with pain at the pit of the stomach. The friend not being at home, she was forced to return on the street car, and did so suffering great pain. The attack lasted for two or three hours.

Ever since that time she has been subject to attacks of pain, occurring every five or six weeks until within the last six months, during which time she has been comparatively free from pain. Each attack of late has been of short duration.

On Sunday, March 18th, 1894, she was suddenly seized with pain that gradually became worse, and towards five o'clock in the afternoon she was forced to send for some chlorodyne. The pain increased, and she called in her physician. He saw her again on Monday, Tuesday, and Wednesday. A consultation was then called, and the patient was removed to the hospital. I saw her on Wednesday afternoon, and found her in intense agony. The temperature was elevated, pulse about 80, expression of the face pinched, and pallor present. On examination of the abdomen, an enlargement was found just under the tip of the ensiform cartilage (see plate). After examining carefully, I came to the conclusion that the case



was one of distension of the gall bladder from obstruction of the cystic duct. There was no jaundice present, there was no bile in the urine, and the motions of the bowels were not clay-colored. I saw her again on Thursday morning, and, owing to the continuing severity of the pain and the tension of the lump, determined on immediate operation. Patient stated that whenever the pain came on the lump would appear, and when the pain left her the lump would disappear so that she could not feel it. Though not jaundiced at any time, she said that her skin had been darker than was natural to her.

On Thursday afternoon, March 22nd, 1894, I made an incision at the lower border of the liver, and brought an extremely tense gall bladder into the wound. A small gray point was to be seen at its tip, the point furthest away from the circulation. This gray spot looked exactly like the gray spots frequently seen on intestine strangulated in a hernial sac. I feel satisfied the gall bladder would have burst had the tension been left unrelieved much longer. The gall bladder was so tense that one was almost afraid to touch it for fear that it might burst. A large quantity of fluid was drawn from it after puncturing it with a trocar, and the fluid was dark and treacly, and indicated that the obstruction of the cystic duct had been but recent. A small stone was found free in the bladder itself, and two stones were found caught in the cystic duct (see plate). These were stripped out by placing the forefinger of each hand above and below, or in front and behind, the cystic duct. By a little gentle pressure they slid downwards like peas out of a pod, until they reached the gall bladder, from which they were removed by the scoop. The gall bladder was then fastened to the wound, and the wound closed in the usual way. The patient has made an uninterrupted recovery.

As soon as she was able to speak after the effects of the anesthetic had passed off, I asked her if the pain of which she had complained so bitterly, a pain that shot through to the back and up between the shoulders, had disappeared. She said "yes," that it had entirely gone, and she felt relieved.

The continuous sutures fastening the gall bladder have not yet come away, and the sinus is still discharging. Bile began to flow about twenty-four hours after the operation.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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AND

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SEVERE JAUNDICE FROM BACILLIARY INFECTION.

M. Hanot has reported many observations which demonstrate the infection of the liver of the coli bacillus, a condition which is followed at times by intense jaundice, accompanied by elevation of temperature. He has been able by puncture to prove the presence of the micro-organism during life, and has placed beyond all doubt the important rôle played by this microbe in such cases.—*L'Union Médicale*.

INFLUENZA PNEUMONIA.

Albu, of Renvers' clinic, discusses (*Deut. Med. Woch.*, February 15th, 1894) the questions whether there is a special form of pneumonia in influenza, and what relation there is between croupous pneumonia and influenza. Influenza pneumonia is really a broncho-pneumonia, like that seen in other infective illnesses—diphtheria, enteric fever, etc. The clinical picture is not as definite as in croupous pneumonia. The following points are noted: (1) Evidence of a preceding attack of influenza is generally present; (2) percussion dullness may be absent, or only present for a short time, shifting its position; bronchial breathing may be the only physical sign; moist sounds are most constantly present; (3) the sputum is never typically rusty; (4) the fever usually sets in without shivering, and the temperature rises gradually; (5) the course is less acute, the infiltration disappears slowly, and convalescence is retarded. The accompanying pleurisy has several peculiarities: (1) It is more frequent than in

croupous pneumonia ; (2) absorption takes longer ; (3) empyema is less frequent, only occurring when the streptococcus is present. The streptococcus empyema is comparatively unfavorable. The author says that the frequency of this streptococcus infection is characteristic of influenza ; the infiltration affects single lobules, but it may become confluent ; it is softer, poorer in fibrin, richer in cells, and may have the character of a purulent fluid. The occurrence of abscess and gangrene has been noted. In one of the author's cases small abscesses were found on the right lower lobe. If such a necrotic focus abuts on the surface, it may produce a pneumothorax. The author relates such a case in a girl, aged 23. Influenza bacilli were found in almost pure culture in the sputum, and no pneumococci. Signs of pericarditis appeared, and, about ten days from the onset of the disease, a right pneumothorax. Puncture revealed later a streptococcus empyema. Opening of the empyema had to be delayed, owing to the critical condition of the patient ; a good recovery ensued. At first, a serous effusion was present, but the rupture of a necrotic focus made it become purulent. Croupous pneumonia is, in the author's opinion, a chance complication of influenza, due to a secondary infection with the pneumococcus. A double infection with the influenza bacillus and Fraenkel's pneumococcus may occur. A confluent bronchopneumonia may simulate croupous pneumonia.—*Epitome, Brit. Med. Jour.*

THYROID EXTRACT.

Dr. P. Abraham recently reported to the London Medical Society the results of the administration of this remedy in 65 cases of psoriasis, 7 of eczema, 5 of lichen planus, 5 of lupus, 2 of chronic urticaria, and one each of prurigo senillis and adenoma sebaceum. Of the cases of psoriasis, 17 were thrown out, some improvement was noted in 18 (only 7 were under the thyroid treatment alone), the result was negative in 16, while in 15 the eruption increased during the use of the drug. Three cases of lichen planus were markedly improved, and the same number of eczemas were benefited. Neither case of urticaria showed any amelioration. He claims two lupus cases exhibited improvement. His general conclusions are that the ingestion of the thyroid glands has no constant effect in psoriasis and other cutaneous diseases, that it often produces marked constitutional disturbances, and that in a large number of cases the results were negative. In a few the trouble was aggravated, although in a certain number a distinctly curative effect was noticed.

It has been suggested that from its action on the horny layers of the skin, thyroid extract might prove of considerable service in ichthyosis and xeroderma.

THE LINEA FUSCA IN CHILDREN.

Dr. Adersen, of Copenhagen, (*Howitz's Gynækologiske Meddelelser*, Bd. 10, H., 1-2) has examined two hundred children with regard to the existence of the pigmented abdominal line reaching up from the pubes towards the navel, and which is regarded as characteristic of the first pregnancy. Of these one hundred and five were girls, ninety-five boys, of fourteen days to thirteen and a half years. Out of these children one hundred and twenty-eight had the characteristic linea fusca or pigmented median abdominal line of pregnancy. Of these seventy-six were girls and fifty-two boys. Its frequency increased with age. In half of them the color was quite pronounced, and in the other only indistinct. Brunettes seemed more predisposed than blondes, though not especially. In eight of the children the line reached above the umbilicus, and in some even up to the ensiform cartilage. Deviations to the right or left of the median line, as Professor Schoenberg has described in adults, were observed in several.

From this he concluded that this line of pigmentation is not to be included in the characteristic signs of pregnancy, as besides being found in children it may be observed in diseases of the genital tract, as, for example, in uterine myomata.—*Journal Cutaneous and Genito-Urinary Diseases*.

INTESTINAL OBSTRUCTION DUE TO GALLSTONES.

Kôrte (*Deut. Med. Woch.*, February 25th, 1894) reports a case successfully treated by operation. A man, aged 52, had suffered from several attacks of biliary colic, calculi having been found in the stools. Six days previous to admission, he was seized with severe abdominal pain, after which no feces or flatus were passed. Vomiting, fecal during the past three days, then hiccough followed. On admission, he was moderately collapsed. There was no hernia, and nothing abnormal was felt either in the cecal region, or in the rectum. The sudden onset with early fecal vomiting, and with but slight abdominal distension, pointed to gallstones as the cause of the ileus. The abdomen was opened, and in some coils of intestine which had dropped down into the pelvis a gallstone was found at some twenty to thirty cm. above the ileo-cecal valve. The stone was removed by a longitudinal incision. The intestinal wall was tightly stretched over it. There was no ulceration or invagination of the mucous membrane. The course was very satisfactory, the bowels acting on the fifth day. The stone was rounded, and without facets. In addition to the above-named symptoms, the comparatively good condition of the patient is more or less characteristic of this form of ileus. A stone already present in the canal becomes arrested by a rapidly oncoming

attack of colic. The bowel above becomes paralyzed, hence early fecal vomiting. Opium was useless here, as in the author's other three cases, which were operated upon with two recoveries. The diagnosis may be very difficult, and, in the author's opinion, only to be based on probabilities. Operation must be decided upon in each case by the non-success of so-called expectant treatment and by the symptoms. The propriety of operating in the above recorded case, after seven days of obstruction, cannot be doubted.—*Epitome, British Medical Journal.*

THE KNEE-JERK IN DIABETES MELLITUS.

Among one hundred and thirty-one cases of diabetes mellitus, Gröbl (*Neurolog. Centralbl.; Wiener med. Presse*) found the knee-jerks normal in one hundred and thirteen, and exaggerated in five. Three of the latter, however, presented not true diabetes, but merely the glycosuria of neurasthenia, and in them both the presence of sugar in the urine and the state of the reflexes were to be ascribed to the condition of the nervous system. Among the other one hundred and fifteen cases were nine of the severe type of diabetes mellitus. Of these nine the knee-jerks were exaggerated in two, which presented great weakness, and in which the urine contained large amounts of sugar and acetone, but in which, as in the course of treatment, the general condition improved, the excitability diminished, and ultimately the knee-jerks became normal. In four cases of severe diabetes the knee-jerks were abolished, or greatly enfeebled. The knee-jerks were also wanting in nine mild cases, but in two of these posterior spinal sclerosis co-existed, and in a third there was such an excess of adipose tissue as to interfere mechanically with the elicitation of the phenomenon. The knee-jerks were thus lost in ten cases among one hundred and thirty-one—7.6 per cent. It was further found that the knee-jerks may be preserved in the most severe cases, even in the presence of coma, while they may be absent in mild cases in which the sugar can be made to disappear by appropriate diet. It thus appears that symptomatically the knee-jerks have little or no significance, either diagnostically or prognostically.—*Medical News.*

THERAPEUTICS

IN CHARGE OF

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AND

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A NEW METHOD OF ARTIFICIAL RESPIRATION IN ASPHYXIA NEONATORUM.

Dr. J Harvie Dew, of New York, has described a new method of artificial respiration in newborn babes, which may be summarized as follows :

Grasp the infant with the left hand, allowing the neck to rest between the thumb and forefinger, the head falling over backwards ; the upper portion of the back and scapula resting in the palm of the hand, the other three fingers to be inserted in the left axilla, raising the arm upwards and outwards. Then grasp the knees (or ankles, if baby is small) with the right hand in such a way as to hold them with the right knee resting between the thumb and forefinger, the left between the fore and middle fingers. Next, depress the pelvis and lower extremities so as to allow the abdominal organs to drag the diaphragm downwards, and with the left hand gently bend the dorsal region of the spine backwards. Retain for two or three seconds, then reverse the movement, bring the head, shoulders, and chest forward, closing the ribs upon each other, and at the same time bring forward the thighs, pressing them on the abdomen. Retain two or three seconds. Repeat movements.

PRURITUS VULVÆ.

Dr. Ohmann-Dumesnil recommends the following :

R.—Hydrarg. Bichlor. gr. iss.
Ammon. Chlor. gr. ii.
Ac. Carbolicæ ʒi. (more or less).
Glycerini ʒii.
Aq. Rosæ ad. ʒviii.
M. ft. lot. Apply frequently.

THE PROGNOSTIC VALUE OF THE INTOLERANCE TO CREASOTE IN TUBERCULOSIS.

M. Burlureaux claims creasote to be a valuable indication of the strength of the sick person. He claims for it, from a prognostic point of view, a diagnostic significance not second to tuberculin, and has been led to draw the following conclusions: (1) Patients not able to tolerate creasote in small doses are irremediably lost. (2) Patients tolerant of large doses have very hopeful chances of recovery. (3) But if after having tolerated large doses he suddenly becomes intolerant, and progressively so, the prognosis becomes, in proportion, less hopeful.

Patients with an ideal tolerance experience neither vertigo nor sweats, darkening of the urine, nor a pronounced after-taste of creasote, lumbago, nor fever. The most intolerant cannot take even the smallest dose without experiencing one or many of the symptoms.

The gravest symptom, *par excellence*, indicating poisoning is the sensation of cold experienced seven hours after the injection. The coldness is usually preceded by an elevation of temperature that commences soon after the injection. It goes on increasing until the seventh hour; then comes the sensation of cold. It goes on until the temperature becomes subnormal. Again, these phenomena may be reversed.

M. Burlureaux considers this intolerance an indication of the depreciation of the organism, and of a profound state of decay.—*Lyon Médicale*.

J.A.A.

THREE CASES OF UMBILICAL HEMORRHAGE OCCURRING IN THE SAME FAMILY.

Dr. Thomas Taylor reports three cases of umbilical hemorrhage occurring in the same family (*The Bristol Medico-Chirurgical Journal*).

CASE I. 1879, Sept. 29th. Eighth child in an otherwise healthy family. Of the previous seven children six are living and healthy; the seventh died in infancy of whooping cough. There is no history of bleeding in the parents or their children, but the mother's first cousin lost two children from umbilical hemorrhage. This baby was large, and apparently healthy. Hemorrhage commenced thirteenth day; bleeding surface was dusted with tannic acid. Next day bleeding continued; tincture of matico applied in place of tannin. Hemorrhage being more profuse in the evening, strong perchloride of iron was applied, with a pad and bandage, which stopped the bleeding for twelve hours.

The following day, hemorrhage profuse; various remedies, including actual cautery, tried, with no effect. Child died three days after onset.

CASE 2. 1883, Dec. 19th. Female, æt. eight days, and healthy looking. This is the tenth child; the ninth had no trace of bleeding from the umbilicus, and lived to be fourteen months old, when it died of diarrhea. Bleeding commenced suddenly on the eighth day. Pressure and styptics stopped the bleeding for a time. On its recurrence two harelip pins were introduced under the umbilical scar, one from above downwards and the other transversely, and a thread passed around underneath. This, for a time, effectually stopped the bleeding, with the exception of a little oozing at the points of entrance and exit of the pins. Two days afterwards free hemorrhage recurred, and the child died three days after the onset of the hemorrhage.

CASE 3. 1887, Nov. 10th. Twelfth child, apparently healthy. The eleventh was stillborn at full term. Labor natural. Cord came off seventh day. Three days afterwards a patch of dark-colored blood seen on the rag. On examination the navel looked pretty healthy, and the edges weeping serous fluid. Nurse directed to paint it with a solution of one ounce of tannin in one ounce of rectified spirits whenever she saw a trace of bleeding, and in the intervals to keep a rag soaked in the solution on the navel. Next day there was no bleeding beyond an occasional oozing; the rag was hardened into an artificial scab over the navel. Two days afterwards there was free bleeding, which was checked on removing the rag and applying the solution with a brush. On the following day nurse says the tannin solution restrains the hemorrhage much more effectually than either vaseline or Ruspini's styptic, with which she was supplied as alteratives. Next day a bruise found on the shoulder; no bleeding of any account afterwards. At time of writing the child is six years old, and a fine, sturdy boy.

Dr. Taylor thinks it curious that the disease did not show itself in any of the first seven children, and that none of the other children ever showed any symptoms of hemophilia. The mother never had any post-partum hemorrhage. Jaundice was not a marked symptom, though bruising was noticed in the first and third cases. The treatment with the solution of tannin in the last case was eminently satisfactory, and the tannin appeared to have more controlling influence over the hemorrhage than either of the other styptics that were tried, and perhaps the styptic renewed constantly, as it was in this case, had a better chance of acting directly on the bleeding point itself than when combined with pressure, as this could not be rendered effective, owing to the abdominal walls being in constant movement. It would be worth while in such cases to give chloride of calcium by the mouth, as suggested by Dr. Wright (*British Medical Journal*). He describes chloride of calcium combined with fibrin ferment as the "physiological styptic."

ACUTE CATARRH OF THE STOMACH OR VOMITING OF PREGNANCY.

The following may be used :

R Phenate of cocaine.....gr. $\frac{3}{4}$
 Subnitrate of bismuth..... " xxx.

M.

Sig.—Make into five powders. Take one powder each morning, or, in the case of gastralgia, one hour before the time for the habitual attack of pain.—*International Medical Annual*.

THE ADMINISTRATION OF SODIUM SALICYLATE IN ACUTE RHEUMATISM.

When for any reason sodium salicylate cannot be given by the mouth in acute rheumatism, Lémanski gives it in the form of a suppository, fifteen grains, with enough coca butter to make it up. One to be used five or six times a day.—*Lyon Médicale*. J.A.A.

THE USE OF ICE IN ASTHMA.

Dr. Sangree has succeeded in cutting short a spasm in a severe attack of bronchial asthma by applying ice over the course of the pneumogastric nerve at the root of the neck. Five minutes after the application the spasm relaxed completely, and the patient slept, after having been four days without sleep.—*Bul. Gen. de Thérapeut*. J.A.A.

RAPID MANUAL DILATATION OF THE OS UTERI.

In a paper read before the Section on Obstetrics, Pan-American Medical Congress (*American Journal of Obstetrics*), Dr. P. A. Harris, of Philadelphia, gave a description of a manual method of effecting rapid and extensive dilatation of the os uteri for parturient purposes, and described its advantages, especially in the treatment of placenta previa. He confines the employment of his method to cases of advanced pregnancy, when it is desirable to effect a prompt delivery. He presupposes the possibility of the full introduction of the index finger to its large diameter without much delay or difficulty.

The woman being anesthetized, he inserts the index finger to its largest diameter, the hand having followed in the vagina. The finger is then withdrawn so that its tip merely enters the os, and then the tip of the thumb is passed in beside the finger. When the tips of both index finger and thumb are thus within the ring, he keeps the index and second fingers (the second finger being sharply flexed) close together to form a notch from which the os-uterine ring cannot easily escape. The straightened and extended thumb, resting on the outer lateral half of the index finger,

is now carried as far from the tip of the index finger as the enlargement of the os will allow. The thumb is then retained on the index finger while the index and second fingers are forcibly flexed. When a little headway has thus been gained, slightly extend the index and second fingers; this will permit the extended thumb to travel farther from the tip of the index finger. Again hold the extended thumb firmly against the outer side of the index finger at this point, and again flex the index and second fingers.

Next, introduce the index and second fingers and thumb, keep the thumb in relation to the first finger as before, while the edge of the os will now rest on the dorsal surface of the sharply-flexed third finger. Next, introduce the third finger, and let the edge of the os rest on the fourth finger. After a slight continuance of the manipulations, the fourth finger may be introduced. As the dilatation may not yet be quite sufficient, make the os encircle the first row of phalangeal bones of the fingers and the second, or last, phalanx of the thumb; then extend the thumb and all the fingers, the tips of the fingers being, at the same time, flexed to lessen their encroachment on the intra-uterine space. After this, if necessary, make the os encircle the second row of phalangeal bones of the fingers and the first phalanx of the thumb, and extend. Complete dilatation, it is said, will have been accomplished by these manipulations in a comparatively short time.

IPECACUANHA WITHOUT EMETINE.

Powdered ipecacuanha root, deprived of its emetic principle, emetine, is stated to have achieved great success in the treatment of dysentery. The virtues of ipecacuanha are well known in this direction, but have hitherto been marred by the distressing vomiting that accompanies large doses. Merck, of Darmstadt, has produced a powder from the root of the best Brazilian ipecacuanha, free from emetine, but containing the other constituents intact. This has proved of great service in British India, the chosen home of acute and chronic dysentery. Scruple doses may be taken frequently, without the usual vomiting. It is known as ipecacuanha deemetinisata.—*The Times and Register*.

OLIVE OIL IN OBSTRUCTIVE JAUNDICE.

Oliver (*Lancet*, No. 3658, 1893) reports two cases of simple obstructive jaundice successfully treated with olive oil. The first patient complained of sudden attacks of severe pain in the upper part of the abdomen, which of late had become more frequent and severe, and had occasionally been attended with vomiting and followed by jaundice. On account of increasing debility the writer finally prescribed olive oil, beginning with one

tablespoonful in milk daily and gradually increasing the amount to six tablespoonfuls. With the exception of a slight attack of colic on the second or third day after the treatment with the oil was instituted, the patient had no further pain and no return of jaundice, and is now in better health than he has been for the last five years. Treatment was continued for several weeks after the disappearance of the symptoms, and, in addition to the oil, he was given two grains of calomel twice a week, and a few drops of extract of cascara sagrada every evening.

The second case, a woman aged 48, had been deeply jaundiced for ten months. The abdomen was retracted and the liver enlarged. She was very feeble, and her mind was depressed. As all other remedies had proved futile, she was given daily two tablespoonfuls of olive oil in warm milk. Within three weeks the jaundice disappeared, the stools became normal, and there was a remarkable improvement in the general condition. The author is unable to give any explanation of the action of the oil in these cases.—*University Medical Magazine*.

ATROPINE AND MORPHINISM.

Koch (*Therap. Monatsh.*, November, 1893) records the case of a patient who frequently indulged in morphine, and to whom on five occasions he administered subcutaneous doses of atropine as an antidote. It always quickly arrested the profuse secretion from the skin, air passages, and intestine; also considerably diminishing unpleasant results due to the abstinence from morphine, and thereby assisting gradual discontinuance of the narcotic. One three-hundredth part of a grain of the sulphate should be given at first, the patient being watched for several hours. A second dose may be administered if necessary.—*British Medical Journal*.

ICHTHYOL IN ERYSIPELAS.

Thomas (*Liverpool Medico-Chirurgical Journal*, July, 1893) refers to the treatment of erysipelas by ichthyol, and mentions four cases so treated, three of which were complicated by large surgical wounds. The onset of the disease was sudden, and the temperature high. As a result of the treatment, the disease was cured on the fifth day. In only one case was there sleeplessness. None required stimulants, and all experienced great relief from pain after each application of the remedy. Success in this treatment depends upon a very thorough rubbing of a strong ointment of ichthyol with vaseline or lanoline into the red area and into the adjoining healthy skin, covering the parts with a sheet of lint or the ordinary surgical dressing.—*Therapeutic Gazette*.

DIAPHTHERIN.

Stabel (*Munch. med. Woch.*, September 10, 1893) has studied the germicidal and pharmacological actions of this new compound. Broth to which diaphtherin was added was inoculated with various kinds of micro-organisms, and similar experiments were conducted with lysol and carbolic acid. The writer believes that diaphtherin is considerably superior to both of the latter germicides. Anthrax spores lost all power of growth after being in a 15 per cent. solution for three days. From a series of experiments on animals, he concludes that even the continued use of diaphtherin in man cannot be injurious, as it could not be used in sufficient quantities to be dangerous. It is especially adapted, on account of its non-toxic properties, to washing out hollow cavities where at present very weak antiseptics have to be employed. It is preferable in 1 or 2 per cent. solutions to other antiseptics where moist applications are required for a long time, as in burns, ulcers, etc. It only discolors the nails and hands when previously soaked in sublimate solution. Steel instruments cannot be put into it.—*University Medical Magazine*.

SYMPTOMS OF CORROSIVE SUBLIMATE POISONING.

Dr. Boxall thinks that the symptoms of corrosive sublimate poisoning are not so generally recognized as they should be. These symptoms are diarrhea, with tenesmus, and occasionally blood, as well as mucus, in the stools, accompanied by abdominal pain. In severe cases the colon, and, to a great extent, the small bowel, particularly in the region of the cecum, become ulcerated. He warns us, if these abdominal symptoms should occur, not to persist in the mercurial douche, and not to check the diarrhea abruptly by administering opium. There is often slight albuminuria, soreness of the gums, loosening of the teeth, occasionally vomiting, salivation, a red line at the margin of the gums, and a metallic taste in the mouth, but these are exceptional in comparison with the abdominal symptoms.

OBSTETRICS

IN CHARGE OF

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NEPHRITIS OF PREGNANCY.

Odebrecht (*Centralblatt für Gynakologie*, No. 30, 1893) relates the case of a primipara, aged twenty-seven, who caught cold at the beginning of her ninth month of pregnancy, and uremia set in, followed by convulsions and partial coma. The urine was scanty and completely coagulated. No pains had set in. The eclampsia ceased after large doses of morphia and wet packing. Twenty-four hours later the patient, perfectly conscious, declared that the movements of the child had ceased ; the fetal heart sounds could not be heard. Five days afterwards a dead, macerated child was discharged. Two circumscribed effusions of blood of the size of a walnut were found in the placenta. In Odebrecht's opinion, they accounted for the death of the fetus. Neither casts, nor blood corpuscles, nor pus cells could be found in the highly albuminous urine. Hence the local disease was not acute nephritis, but rather the kidney of pregnancy, and the sudden chill increased renal congestion, setting up eclampsia and uremia in the mother, and killing the child through placental apoplexy.

This case is an excellent example of the relation between renal disease in the mother and death of the fetus.—*University Medical Magazine*.

HIGH TEMPERATURE AFTER LABOR.

Tournay (*Journal d'Accouchements*) publishes the statistics of the Brussels Maternity for 1893. The total number of labors was 440. Amongst numerous subjects of interest, Tournay notes that in only 28 cases was there rise of temperature over 38° C. (100.4° F.). The causes of the rise were : Various affections of the breasts, 6 cases ; acute endocarditis, 3 ; uterine congestion, 3 ; septicemia, 3 ; obstinate constipation, 2 ; traumatism, 2 ; neuralgias, 2 ; enteritis, 2 ; bronchitis, 1 ; eclampsia, 1 ; tuberculosis, 1 ; cardiac disease, not precisely defined, 1 ; cause of rise of temperature unknown, 1.—*British Medical Journal*.

DUHRSSSEN'S TAMPONADE OF THE UTERO-VAGINAL CANAL.

Siepen (*Deutsche medicinische Wochenschrift*) applied the forceps to the head at the superior strait in a xii.-para, after the labor pains had fully ceased for nine hours. After the extraction of the child there was copious hemorrhage, which did not cease after the manual separation of the placenta. As symptoms of acute anemia appeared, he tamponed the uterus with iodoform gauze by inserting the index finger of the left hand into the cervix, and placing the gauze in position with a forceps held in the right hand. After tamponing the uterus, the vagina was filled with cotton. The hemorrhage ceased. Both tampons were removed after twenty-four hours. The puerperium was normal.—*University Medical Magazine*.

THE TRANSMISSION OF THE OVUM FROM THE OVARY TO THE TUBE.

Lode (*Archiv fur Gynakologie*, Band xlv., Heft 2) first repeated the experiments of Kehrer and Pinner, injecting an emulsion of charcoal into the abdominal cavity of rabbits, and, like these authors, he was able, after a few hours, to demonstrate charcoal particles in the opened tubes.

He next substituted ova of animals for the emulsion, using the ova of *ascaris lumbricoides suis*. After a lapse of twelve hours large numbers of these ova could be seen in the dissected tubes. These investigations prove that the ciliary currents can propel the ova, not only from the ovary to the tube, but also from the abdominal cavity. They show that the fimbriated extremity of the tube need not be in contact with the ovary during the expulsion of the ovum, and that the external migration of the ovum is certainly possible.—*American Journal of Obstetrics*.

PLACENTA PREVIA.

Rueder (*Munch. med. Woch.*, No. 33, 1893), after experience of twelve cases in the Erlangen Lying-in Hospital, agrees with Hofmeier that Braxton Hicks' combined internal and external version is the best treatment, directly the os has dilated till it can admit two fingers. Every practitioner who is already used to obstetric manipulation should follow that rule. A young or inexperienced doctor should first employ the iodoform gauze tampon; then he can safely wait until the cervix is sufficiently dilated to render combined version easy. In three of Rueder's cases there was central placenta previa; all the children died, but the mothers recovered, and the puerperium was always normal. In the four cases of placenta previa lateralis, all the children, as well as all the mothers, were saved. In the remaining five cases of placenta previa, the variety was marginal, and the mothers were all saved; but in three there was rise of temperature during childbed.—*British Medical Journal*.

GALACTOPHORITIS.

Boissard (*Semaine Médical*, October 11th, 1893) draws a distinction between galactophoritis, which is an inflammation of the mammary ducts and acini, and lymphangitis, which attacks the connective tissue around the gland. Frequently the two forms are mixed, and some of the worst cases of fistulous tracts and frequent repetitions of acute inflammation are the result. Galactophoritis uncomplicated may arise from a very slight abrasion near the orifice of a duct, or it is possible that it may follow the entrance of streptococci or staphylococci into a healthy duct. The disease causes but little pain, slight feverishness, is seldom ushered in with rigors, and is attended with the discharge of free pus from the nipple. Milk containing pus, as compared with pure milk, is of a grayer or greener hue, and is not so quickly absorbed by wool kept against the nipple. It does not trickle freely from the nipple, but tends to clot around the part, being less fluid than pure milk. The child invariably suffers, rapidly losing weight, and developing diarrhea with green-colored stools. Death is almost certain. Boissard insists upon immediate cessation of lactation from the affected breast, or, when both glands are affected, altogether. He recommends that the patient be anesthetized, and pressure applied to the breast until every drop of pus is squeezed out. The pressure is applied from circumference to centre. When no more of the pus-charged milk escapes, the nipple and breast must be freely sprayed for half an hour with a solution of bichloride of mercury or naphthol. Then a compress must be applied and kept on until the next manipulations. Only three or four applications of this method are needed, and the disease is eradicated in a week. Any mere palliative treatment will certainly kill the child, and place the mother in great danger of suppuration of the breast.—*University Medical Magazine*.

PUERPERAL SEPTICEMIA CURED BY HYPODERMIC ABSCESS.

Thierry, of Rouen (*Nouvelles Archives d'Obstét. et de Gynéc.*), observed a case in which a rigor occurred on the second day after labor. The curette was applied on the seventh, and one gramme of essence of turpentine was injected hypodermically. This was repeated twice on the eighth day. By the tenth day a phlegmon developed at the seat of the punctures. It was freely opened, and suppurated. On the nineteenth day the temperature, which had fallen, rose again, as the pus in the artificially provoked abscesses was pent up for awhile. On setting it free the fever disappeared, and the patient recovered. The injections were made into the extensive connective tissue behind the great trochanter on the right side. The site of puncture became indurated within a few hours. The

patient, it must be remembered, showed signs of improvement when this induration began, but convalescence was not steady until suppuration was established. Since 1860 it has been observed that general puerperal septicemia usually improved when subcutaneous abscesses formed and opened. Thierry, in 1888, provoked them artificially by setons, blisters, etc., but the subsequent inflammation proved hard to localize. He found that the subcutaneous injection of chemicals was more satisfactory. Fochier, of Lyons, first employed essence of turpentine, which is superior to sublimate, carbolic acid, or any other solution which has already been tried.—*British Medical Journal*.

TREATMENT OF ECLAMPSIA.

Tarnier (*Journ. des Sages-Femmes*, February 1st, 1894) maintains that eclampsia represents a true poisoning of the blood. It is not caused by retention of urea or carbonate of ammonia in the blood. In eclampsia the blood is absolutely poisonous, as experiment has shown. On this account Tarnier holds that blood must be abstracted in a case of puerperal eclampsia. But then the patient would have less blood (and loss of blood is a great evil under the circumstances), and that blood would be as poisonous from the first as the blood removed. Hence the advantage of milk diet, which is, to a great extent, absorbed, so that the blood becomes diluted, increasing in bulk, with diminution of the proportion of poisonous material. Free purgation is also desirable for ensuring elimination of poison; Tarnier gives croton oil. Inhalations of chloroform are also beneficial; they calm the nerve centres, which are excited by the circulation of poisonous blood, and thus check, in a direct manner, the tendency to convulsions.—*British Medical Journal*.

OXYGEN INHALATIONS DURING PREGNANCY AND PUERPERY.

Rivière has found, as the result of much experience, that inhalations of oxygen are of value under many circumstances, both for mother and child. This inhalation is serviceable in counteracting the evil effects of chronic or acute thoracic diseases during pregnancy, which so often causes abortion or premature delivery. In uncontrollable vomiting and anorexia, inhalations are also useful. After-delivery inhalations superoxidize the blood, which appears to enable the fluid to resist sepsis. When a pregnant woman is ill or weak, inhalations always profit the fetus, whose nutrition is thereby improved. Rivière goes so far as to contend that the method is of service in placental disease, or even in partial detachment of the placenta; it allows, he believes, more complete oxidization of the fetal blood in the diminished area of sound placenta that remains. Altogether, however, he

admits that inhalations are of more certain benefit for newborn children, whether they be emaciated from some cause which existed before birth, or continue to be thin for some period after delivery, owing to malnutrition.

Mr. Rivière details the following conditions as indicating the use of inhalations of oxygen :

(1) In the pregnant woman. To over-threatened asphyxia consequent on pulmonary or cardiac disease. Whenever nutrition is impaired or enfeebled through persistent vomiting which interferes with digestion.

(2) In childbed. To strengthen the patient, and enable her more efficiently to contend against the invasion of septic microbes.

(3) In the pregnant woman, but to act on the fetus. Whenever there is reason, either from a parallel or other condition in the mother, to suspect that the fetal blood is insufficiently oxygenated. In placental lesions which might produce a similar effect on the fetal blood.—*International Medical Annual*, 1893.

BOROLINE.

Boroline, a combination of boracic acid with lanolin, is recommended as an excellent lubricant and emollient antiseptic in midwifery practice.

ANTISEPTIC MIDWIFERY.

We extract the following from an article which appeared in the *British Medical Journal*, February 24th :

The application of antiseptic methods to all the various details and events of obstetric work is a large subject, and one worthy of more minute treatment than it usually receives in the text-books in common use by students. On this we cannot touch, but there are certain things which are so essential in every case, and are, we fear, so frequently neglected, that even at the risk of appearing elementary we formulate them as a routine to be followed in every lying-in chamber both by doctor and nurse : (1) The hands and wrists should be thoroughly cleansed with hot water, soap, and nail brush, and then soaked in some antiseptic solution, of which perchloride of mercury 1 in 1,000 is the best, whenever the patient's genitals have to be touched, and no lubricant should be employed which is not antiseptic ; (2) in an early stage of the labor the external genitals should be thoroughly cleansed with warm water and soap, and then swabbed with the same antiseptic solution, pledgets of cotton wool being used and no sponges allowed ; (3) during the progress of the labor the external parts should be occasionally wiped with pledgets of wool moistened with the antiseptic ; (4) the washing and disinfection of the external parts with soap and water, followed by perchloride, should be

repeated after the labor is over, and once a day afterwards ; (5) each time a diaper requires to be changed during the after-progress of the case, the outer parts should be wiped with a pledget moistened with perchloride solution ; (6) all instruments should be thoroughly cleaned by boiling, and be disinfected immediately before use either by perchloride, 1 in 1,000, or by carbolic lotion, 1 in 20 ; (7) whenever either the finger or an instrument has to be introduced, the vulvar fissure should be previously cleaned with pledgets of wool soaked in perchloride solution, 1 in 2,000 ; (8) the diapers should be clean, preferably either the "wood wool" or "sanitary" pads sold for the purpose ; but, if the ordinary diapers are used, care should be taken that they are boiled in the washing.

SALIPYRINE IN THE TREATMENT OF UTERINE HEMORRHAGE.

The *Revue générale de médecine, de chirurgie et d'obstétrique* for November 15th gives a summary of an article by Dr. Kayser, published in the *Deutsche medizinische Wochenschrift*, who gives his experience in the treatment of a number of cases of uterine hemorrhage with salipyrine. He has employed the drug in sixteen cases, but in three of them the hemorrhage was too severe to allow of a sufficiently prolonged trial of it. In all but one of the thirteen other cases the use of salipyrine reduced the hemorrhage, no matter what its cause was, excluding cancer and abortion. In some of the patients the hemostatic effect lasted for several days after the use of the medicine had been suspended. It had no effect on pain. It was especially efficacious in cases of menorrhagia coming on at the time of the menopause. It was well borne in every case, but with two or three of the patients it caused a little ringing in the ears. It was given in powder or in the form of compressed tablets, in doses of fifteen grains three times a day. As nearly as possible, its administration should be begun on the day before a menstrual period is expected.

PUERPERAL SEPSIS.

Dr. R. W. Murray, of New York, read an interesting paper on "Puerperal Sepsis" at a meeting of the Medical Society of the County of New York, January 22nd. He strongly advocates the use of antiseptic remedies, believing that it is only through antisepsis that asepsis can be secured. He referred to the good results obtained during the last few years in the Maternity Hospital of New York. The antiseptics used were corrosive sublimate, carbolic acid, and creolin, the latter being preferred by Dr. Murray.

We were somewhat surprised to learn that in the Maternity Hospital the urine was usually drawn with a catheter every eight hours ; and certainly agree with Dr. Garrigues, who stated, in the discussion following the reading of the paper, that it was better to allow the woman to urinate naturally if she could. In the Burnside Lying-in Hospital, Toronto, the practice is to avoid the use of the catheter as far as possible. As a matter of fact, it is only used in a small minority of cases ; and it has not infrequently been noticed that, when the catheter has been used in any particular case, other patients in the same ward are very apt to lose the power of voiding their urine. The necessity for this instrument frequently becomes infectious in consequence of certain psychological processes which we will not now discuss ; and we think that *catheteristic* epidemics should not be encouraged or fostered by hospital authorities.

SURGERY

IN CHARGE OF

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NEW SURGICAL TREATMENT OF CHRONIC EMPYEMIA.

M. Delorme describes a new operation that is destined to replace Estlander's. It consists essentially in making a large flap of the thoracic wall, resecting several ribs to accomplish this. The flap is left attached at the upper part. The pleural cavity is thus exposed; the lung is then carefully peeled. It is remarkable that, as soon as a piece of adherent membrane is removed, the lung immediately expands—forms a hernia, as it were. After having carefully removed the false membrane, and scraped the parietal pleura, the flap is sutured and dressed. The results of the operation appear to have been most excellent.—*Méd. Moderne*, Jan. 24th, 1894.—*Lyon Médicale*. J.A.A.

THE EFFECTS ON DIGESTION OF THE REMOVAL OF THE GALL BLADDER.

This ablation, which has become quite a frequent operation, modifies the physiological conditions of digestion, in causing the flow of bile into the intestine to be continuous, when it formerly was intermittent. Küster once held that the absorption of fats would be much interfered with, and the operation would bring on general troubles as serious as any brought on by thyroidectomy. These fears have not been realized clinically, and Rosenberg, in a series of experiments done on dogs, has shown that the continuous flow of bile into the intestine after ablation of the gall bladder brings on only a very insignificant modification on the absorption of nitrogenous foods (93.50 instead of 95.75), and of fats (97.69 instead of 98.66). These figures show the average daily feedings given before and after the operations.—*Gazette des Hopitaux*. J.A.A.

ELASTIC CONSTRICTION AS A HEMOSTATIC MEASURE.

Dr. W. H. Elliott, of Savannah, at the recent meeting of the Georgia State Medical Association, addressed the association on this subject. He said the association was familiar with Esmarch's method, which consisted in putting on an elastic bandage from the periphery slowly and gradually, so as to empty the limb of blood, putting it on up to a point just above where the surgeon is going to operate. He then puts on a narrow elastic band at that point, so as to cut off the circulation from the limb entirely; then removing the compression bandage to go on with the operation, which he had fitly called "a bloodless operation." Esmarch was not the inventor of the bloodless operation, but surgeons were indebted to his genius for improving its technique, and for making this established method a popular procedure in surgery. The speaker then stated the two grave objections against the method as used by Esmarch, as advanced by Dr. Senn. The first objection was that forcible compression of the blood out of the tissues by an elastic bandage was liable to send into the surrounding tissues the elements of microbic and malignant diseases. Cancer cells may thus be scattered and disseminated through the system, or the cells of pus or of tuberculosis might be sent abroad to do damage elsewhere. The second objection raised was that the constricting of the limb with a tube or a narrow bandage at one point was liable to do injury, first, to the muscle, and, secondly, to the nerve. Dr. Elliott had used Esmarch's method, as modified by Dr. Senn, with great satisfaction.—*Medical Record*.

Senn's modification of Esmarch's method consists in :

- (1) Elevation (of the limb) instead of the application of rubber bandage for the removal of the blood prior to constriction.
- (2) The diffusion of the elastic constriction of the limb over an annular space of not less than two inches in width, to lessen the danger of injuring important structures passing beneath the constrictor (tourniquet).

Senn also advises that constriction be made with sufficient force to interrupt at once both venous and arterial circulation.

L.M.S.

SYMPTOMATOLOGY OF INTRACRANIAL TUMORS.

Dr. James Taylor, in an interesting lecture published in the *Lancet*, makes the following remarks regarding this subject :

As you are no doubt aware, the trilogy of symptoms which are supposed to be absolutely pathognomonic of this affection is represented by headache, vomiting, and optic neuritis. If you have those three present, the existence of a tumor is almost certain. The only condition I can imagine which might cause all of them and not be tumor is meningitis,

usually tuberculous; but the converse is by no means true, for you may undoubtedly have a cerebral tumor with not one of those three symptoms present. To this I shall again refer presently, but in the meantime let us consider for a moment the character of those three symptoms. The *headache* of intracranial tumor is not absolutely characteristic. It is, so far, at least, as our present knowledge goes, in no way localizing—*e.g.*, it is notorious that the headache in cerebellar tumor is very frequently frontal, sometimes occipital, often both. Its chief characteristic is that it is paroxysmal, and another distinguishing point is that it is frequently accompanied by vomiting without nausea. The local tenderness in the scalp which is sometimes present in cases of tumor is not to be confounded with the headache, and, whereas the former in many cases is significant, the latter is as yet without localizing influence. The vomiting of optic neuritis may also be described as sudden and paroxysmal, as occurring without nausea, but as being frequently associated with headache. It is to be carefully regarded and treated, for a severe attack of vomiting is often the immediate precursor of death. The last of the three—optic neuritis—is the most important. Optic neuritis may be present, for example, in albuminuria and lead poisoning, and, also, it is said, in anemia without tumor; but in the great majority of cases there is no doubt that it is indicative of intracranial tumor. It also is not localizing, although I believe that the optic neuritis of cerebellar tumor is, in its characters, frequently at least suggestive. There is no doubt that, in many cases of cerebellar tumor, the neuritis is particularly intense, being accompanied by numerous hemorrhages, and by the peculiar fan-like arrangement of glistening white spots radiating from the macula, which is common in albuminuric retinitis. This form of neuritis I have seen much more frequently associated with cerebellar tumor than with any other variety, although, as I have said, it is not pathognomonic, only suggestive. So much for the general symptoms of tumor. I shall now briefly consider the symptoms associated with growth in different parts of the brain or cerebellum. Growths in or encroaching on the cortex are characterized more than others by localized pain on pressure over the scalp at the place corresponding to the underlying tumor. The more superficial the tumor, the more marked is this symptom. Localized convulsion—*i.e.*, convulsion starting in some particular segment of a limb—although not present in all cortical tumors, is also present only in a tumor in which the cortex is involved. This convulsion may be only slight twitching, and nothing more; it may also be local cramp, which ceases before it has extended; but, on the other hand, it may begin as either of these, and gradually go on to a convulsion which affects the whole body and abolishes consciousness. After such a fit there is usually local paralysis, most marked in the part in which the con-

vulsion started. All these statements have been illustrated in the history of the first case I showed you to-day, in which the tumor was in the cortex itself. Tumor in the white matter of the cerebrum may have the general symptoms already referred to. Its special characteristic is a slowly increasing paralysis, commencing in one limb. There may be no fits, and little or no headache. If the growth encroaches on the posterior part of the internal capsule, there may be anesthesia, and even hemianopia. The part of the body paralyzed will, of course, depend upon the position of the tumor. It is in such tumors that not infrequently all the three usual symptoms of tumor—headache, vomiting, and optic neuritis—are absent, especially if the tumor is a slowly growing one. The distinctive symptom of tumors of the pons and medulla is the involvement of one or more of the cranial nerves, and it should be remembered that often marked evidences of paralysis may be present before any of the classical symptoms of tumor declare themselves. Especially is this true when the growth is an infiltrating one, and when, so to speak, the structures are slowly strangled, and their functions gradually abolished. In such cases it is not uncommon to have little or no headache, and optic neuritis is probably as frequently absent as present. As regards the cerebellum, there are two distinct classes of tumor in regard to their symptoms—viz., those in which reeling is present, and those in which it is not. In the former class the symptoms are, as a rule, though not invariably, much more severe, and are believed to depend upon an involvement of the middle lobe. In the latter class of cases the symptoms may not be obtrusive. Occasionally, headache and sickness, but nearly always optic neuritis, will be present, but often in such a way as not to excite suspicion, and this is a class of cases in which the diagnosis is apt to be missed. One point of interest, perhaps of importance, is the state of the knee-jerk in cerebellar cases. In some cases it is unusually brisk, chiefly in those, I believe, in which there are reeling and unsteadiness; in others it is absent, either constantly or at times, and always difficult to elicit. In two cases with such symptoms which I have examined *post mortem*, the tumor was in the lateral lobe, not affecting the middle lobe at all. Smell, also, is not uncommonly abolished in cerebellar cases. Whether this is a result of the intracranial pressure on the olfactory lobes, or whether it is due to a condition of these nerves analogous to that which abolishes the function of the optic nerves, it is not easy to say. That it is due to any involvement of the actual centre is very unlikely.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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A PLEA FOR MORE FREQUENT AND EARLIER COLOTOMY IN PAINFUL MALIGNANT DISEASE OF THE RECTUM.

Strauss, of St. Louis, in *Mathews' Medical Quarterly*, says: The most signal advance in the surgery of the rectum of late years is the doing away with the idea that intestinal obstruction is the only indication for colotomy. In fact, the indications are varied and many. In the last decade surgery of the rectum has made great progress, and especially in the treatment of malignant diseases. From a surgical aspect, the various countries differ as to what the treatment shall be. England, so noted for her conservatism in everything, and surgery as well, has come to treat most of her cases of malignant diseases by making an inguinal colotomy, save in the very limited number of cases where an excision is indicated; that is to say, where the contiguous tissues are not as yet involved. They seldom make a Kraske, and rarely or never make a full-fledged one, holding, in the vast majority of cases, that an inguinal colotomy meets every indication for which an operation is made, and that, too, with much less risk to life than a Kraske, or any modification of it. Surely no better evidence could be produced for the making of an operation than the fact that the English surgeons advocate and make it. And, further, that there is a consensus of opinion not only among themselves, but among the continental surgeons as well, that the majority of cancerous cases should be early colotomized. Inguinal colotomy is always advised at St. Mark's Hospital, London. There have been more colotomies made in that institution than any other hospital of any other country, and the results have been carefully studied and noted by Mr. Allingham, jr., who has become the champion of this operation. Mr. Bryant says that the operation has been too much regarded as a *dernier ressort*, and, as a consequence, was only carried out when all other measures had been tried and

proved to be useless, and that he wishes to combat this idea, and favor its earlier and more frequent performance.

He gives three reasons for colotomy: (1) Relief of pain by doing away with the function of the rectum. (2) Extending the lease of life. (3) The risk of the operation has been minimized. Allingham reports sixty-eight colotomies and only two deaths. Cripps, forty-five with one death. Reeves, sixty-five without a death. He by no means advocates colotomy in all cases—only those in which nothing else can be done. He quotes from Kelsey the following paragraph, which expresses in a very forcible way a very trite aphorism:

“If colotomy will put thirty pounds of flesh on a cancerous patient, and cause such an amount of relief to his local symptoms as to make him believe himself entirely cured; if, by removing the chief cause of local irritation, it will tend to retard the inevitable increase in growth, and if the artificial anus is not a cause of mental or physical annoyance, why delay giving the patient the advantage of it at once, and why put off an operation with less than one per cent. mortality until in the midst of intestinal obstruction the mortality becomes thirty or fifty per cent.?”

He refers to the experience as expressed in the current literature of the past year, and shows that there is a great tendency to resort earlier to colotomy—even the Germans are doing it—and concludes as follows: “It only remains for us to ascertain which holds out the better prospect of relief in any given case. In some it will be a Kraske or some of its modifications, in others colotomy; and before another half decade has passed, I believe that the general rules laid down for selecting the method of treatment will be generally agreed upon throughout the surgical world. I think it safe to say that colotomy, in the near future, will be made earlier, and more often, for the reasons, to recapitulate: First, it extends the lease of life, and, second, it makes life tolerable. To me this is an established fact, a demonstrated verity.”

SUPRAPUBIC CYSTOTOMY IN URETHRAL IMPERMEABLE STRICTURE.

Dr. Lindfors (*Hygiea*) read a paper on this subject before the recent Congress of Scandinavian Surgeons, in which he gave the details of two cases. Catheterization was impossible, and urgent indications forced him to make a vesical fistula. The first case was that of an elderly man with prostatic hypertrophy and ankylosis of the hip-joint, where a suprapubic fistula was done with very good functional results. He improved so much that he was discharged. He died later of senile marasmus. The second case was a young man with an inflammatory stricture and various symptoms which indicated operative measures. He then presented the indications

for operation for vesical stricture. He, like Guyon, is not in favor of modern prostatectomy, as is so often done by American surgeons. In the discussion Dr. Roving reported a case of inflammatory stricture of fifteen years' duration where resection of the urethra was done with very good functional results.—*Journal Cutaneous and Genito-Urinary Diseases.*

AFTER TREATMENT OF EPICYSTOTOMY.

D. Borelius (*Hygiea*) at the recent Congress of Scandinavian Surgeons read a short paper on three cases where he had sutured the bladder wound after suprapubic cystotomy. The wound healed in a short time. After death of these patients from other causes, he examined the cicatrix from the interior of the viscus, and found that only the skin had healed. At the place where the sutures were applied to the bladder he found a small cavity filled with detritus, and of the size of a walnut. Its walls were irregular, and reminded one of a *vessie à collonne*. Hence, he warns against too much confidence in apparently complete healing after suturing of the bladder in suprapubic cystotomy.

[I can corroborate the fact that the wound made in the bladder does not heal kindly after suturing. It does much better when healed by the open method. It is a practice that should only be followed in a few selected cases, particularly where the bladder wall is perfectly normal.—E.E.K.]

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

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BROMOFORM POISONING AND BROMOFORM IN PERTUSSIS (HOLDEN).

A child two and one-half years of age drank four grammes of bromoform, and a three-year-old child six grammes. In both swallowing of the drug was quickly followed by loss of consciousness, asphyxia, absence of apex beat, slow, small pulse, cyanosis, subnormal temperature, and pulmonary edema. Under free use of stimulants both recovered. While the first-mentioned case was under the influence of the bromoform a severe coughing paroxysm occurred. In the second case the disease was much less severe after the effects of the drug had worn off.—*Archives of Pediatrics*, March, 1894.

A CASE OF HEMORRHAGIC VARICELLA WITH PEMPHIGOID BULLÆ, ENDING IN DEATH.

In the *Archives of Pediatrics* for March, 1894, John Thompson, of Edinburgh, reports a varicella with unusual symptoms.

Patient, æt. thirteen months ; healthy parents ; ten children, all healthy. Child was at the breast, but had also been fed with bread and milk. Child had always been healthy, and had at no time any signs of syphilis.

Eruption appeared on November 26th, as a number of papules on head and trunk. During the day the child vomited several times. On the 27th these papules became vesicular. On the 28th the vesicles spread in many places to watery blebs, which were especially large on the back. 29th, back covered with large bullæ. Many of these had burst.

When the author saw the child he was in a state of extreme weakness, but was well nourished and well developed. Pulse 144, weak. Fontanelle depressed ; organ normal ; skin was livid all over ; eruption consisted of papules, vesicles, pustules, scabs, and slightly depressed scars. They were on face, scalp, trunk, and limbs, and had mostly small hemorrhage with them. They had all the appearances of varicella spots. There were none on mucous membrane. In addition to these small spots, there were a

great many large, irregularly shaped, rounded raw areas, left by the bursting of bullæ. Many of these measured from one to two inches across; most of them were hemorrhagic. They showed no sign of gangrene, although livid and unhealthy. The patient died a few hours after. No *post mortem* permitted.

The twin sister of the child had varicella eruption a day earlier than her brother. She did not vomit. Had an ordinary eruption of varicella, but eight or ten bullæ appeared on shoulders. In no situation was the eruption hemorrhagic. The child recovered rapidly.

TUBERCULAR MENINGITIS CURED BY DRAINAGE.

Dr. W. Wallis Ord and Mr. H. F. Waterhouse read notes of a case of tuberculous meningitis in a child, aged five, relieved by drainage. The child was admitted in an apathetic condition, with double optic neuritis. From time to time she uttered a piercing scream, and the *tache cérébrale* was well marked. Symptoms of intracranial pressure having supervened, and the child being on the point, apparently, of passing into a condition of coma, Mr. Waterhouse trephined through the cerebellar fossa of the occipital bone, giving exit to a small quantity of fluid. A drainage tube was left in, and the wound was closed, the fragments of bone being replaced by Macewen's method. The child did well, and the symptoms subsided, though at one time the wound seemed to have been infected by tubercle. The question of diagnosis was discussed, and it was pointed out that for success to be hoped for it was necessary not to wait until the child was actually comatose.—*British Medical Journal*, March 10, 1894.

HEART INFLAMMATIONS IN CHILDREN.

Octavius Sturges, in the course of his Simmerian lectures on this subject, points out that endocarditis alone is met with in children far less than in adults, and, were we to take *post-mortem* evidence alone, with remarkable rarity, cases of chorea alone excepted. The rheumatic heart inflammation of children, when pericardial, is always endocardial as well, and when endocardial is extremely likely, with the recurrence of rheumatism, to involve the pericardium also. Thus, in the heart as elsewhere—as in catarrhal inflammations and tuberculous development—the differentiation of morbid processes is less marked in the child than in the adult, and a common sympathy more apparent.—*British Medical Journal*, March 17, 1894.

PATHOLOGY

IN CHARGE OF

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MORBID ANATOMY OF BASEDOW'S DISEASE.

Joffroy and Achard have made complete investigation of six cases of this disease. As a result, they have concluded that nervous lesions are wanting, *e.g.*, in the bulb, restiform bodies, etc. This fact also tells against the nervous origin theory, viz., that in the thyroid body there are *always* present some lesions; even though they be not macroscopically visible, the microscope shows them. These lesions are various; interstitial sclerosis, edema, etc., have been found. Joffroy and Achard think that the morbid anatomy of the disease goes to prove that its origin lies in the morbid changes in the thyroid itself.—*Rev. Intern. de Bibliog. Med.*, etc., January, 1894.

THE MICROBIC SYNTHESIS OF TARTAR AND SALIVARY CALCULI.

Mr. V. Gallippe, in April, 1886, published the results of a microbiological analysis of tartar and salivary calculi in particular and calculi in general. These studies he has since completed, and they tend to demonstrate that the parasites found in these concretions or calculi are not present accidentally, but are really the chemical agents that bring about the precipitation of the substances which constitute them. The parasites preserve their vitality for several years, and may be isolated and cultivated. He experimented from December, 1885, to the end of February, 1890, trying to synthetically build up, through the agency of microbes, salivary calculi and tartar. At the end of this time, he found, in normal saliva, saturated with carbonic acid (CO_2), quite a number of small concretions of variable densities.

By the aid of reagents he discovered that the organic part of these calculi was formed of a close network of micro-organisms which had determined the precipitation of the mineral constituents.

These micro-organisms vary according to the kind of calculus, and have retained their vitality and may again be cultivated. The calculi examined contained phosphates and carbonates of calcium and magnesium. It can readily be seen that the growth of such calculi may become enormous, provided the necessary mineral compounds are furnished in sufficient quantities.—*From the Microscopical Bulletin.*

CONTRIBUTION TO THE PATHOGENY OF UREMIA.

The phenomena of uremia (Meyer, *Arch. de Phys.*, No. 4, 1893), according to Brown-Sequard, depend not entirely upon faulty elimination by the kidneys of substances formed by the organism, but also upon an insufficiency or absence of a chemical change which the healthy kidney exercises upon the blood. Meyer demonstrates the truth of this in this way. Renal juice is injected into the blood of animals in which Cheyne-Stokes respiration has appeared as a result of nephrectomy. The respiration has become normal. Injection of normal blood—the physiological renal secretion—has the same effect, and blood from the renal vein, as would be expected, is most potent.—*Rev. Intern. de Bibliog. Med.*

THE CO-EXISTENCE OF CANCER OF THE CARDIA AND OF THE DUODENUM.

M. Paul Courmont presented to the Society of Medical Sciences of Lyons gross specimens taken from a subject of double cancer. One tumor was at the cardiac end of the stomach, the other in the duodenum. During life, the diagnosis had been cancer of the esophagus, and the cancer of the duodenum, which had been felt on palpation, had been considered as a nodule of generalization in a gland. There were no subclavian glandular enlargements, though.

The tumor of the cardia was nodular, and obstructed the lumen of the esophagus. It had many of the characters of a primary tumor. The duodenal tumor was about the form of a mushroom, of the diameter of a silver dollar. It was fungous and soft. The common bile duct was not obstructed. The patient never had jaundice, and did not show any of those symptoms indicative of cancer of the head of the pancreas.

Was there here a graft from the first cancer, or must it be admitted that there co-existed two primary cancers? It is rather difficult to determine. It seems more probable, though, that the second cancer was a graft from the first.

PROGRESS OF MEDICINE.

In the discussion which followed, M. Bard said that the histological examination alone could settle the question. Cases of multiple primary cancers are rare, and even those cases reported are not altogether authentic.

In his article (*Archives Générales de Médecine*) M. Bard pointed out that there existed but four or five authentic cases.

M. Lannois considered the absence of enlarged lymphatic glands a point in favor of the graft theory, as opposed to that of generalization.—*Lyon Médicale*.

J.A.A.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

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AND

E. HERBERT ADAMS, M.D., D.D.S.

REGISTRATION OF THE TUBERCULOUS.

The action of the various State and Local Boards of Health in regard to the subject of tuberculosis is one of transcendent interest. It marks a new era in sanitation, and means that, as years go by, tuberculosis will gradually become less and less a scourge, if not actually extinct. A disease which kills twelve per cent. of the population is something that is worth while to try to abolish.

The New York State Board compels the registration of all tuberculous persons, but does not attempt sanitary visitation and disinfection, except under certain conditions. The Philadelphia Board does not require registration, but simply attempts an active educational campaign in the matter of preventing the disease.—Editorial in *Medical Record*.

CHOLERA IN RUSSIA.

On the first of March, all the governments of the Russian Empire, with the exception of Volhynia, Koone, Plock, and Tchernigoff, were officially declared free of cholera.

THE ISOLATION HOSPITAL GRANT.

A civic deputation from Toronto have waited on the Provincial Government, urging the necessity and justice of an isolation hospital grant. The government promised to give the subject a careful consideration.

FOR THE PREVENTION OF BLINDNESS IN THE STATE OF OHIO.

A bill for the prevention of blindness in the State of Ohio has become a law. It has the following provisions: "Should one or both eyes of an

infant become inflamed or swollen, or show any unnatural discharge at any time within ten days after its birth, it shall be the duty of the midwife, nurse, or relative having charge of such infant to report in writing within six hours to the physician in attendance upon the family, or, in the absence of the attending physician, to the health officer of the city, village, or township in which the infant is living at that time, or in case there is no such officer to some practitioner of medicine legally qualified to practise in the State of Ohio the fact that such inflammation, swelling, or unnatural discharge exists. Any failure to comply with the provisions of this act shall be punished by a fine of not less than ten dollars, nor more than one hundred dollars, or imprisonment for not less than thirty days, nor more than six months, or both fine and imprisonment.

"This act shall take effect or be in force from and after its passage."

A COMMITTEE ON PUBLIC HEALTH.

The Committee on Public Health of the Massachusetts Legislature has reported adversely on a proposed bill to require patent medicine bottles to have on them a label stating the percentage of alcohol in the medicine, and also adversely on a bill requiring cans and receptacles used by milk dealers to be kept free from impurities.

A RAID ON ABORTIONISTS.

On March 23rd the police of New York arrested sixteen advertising abortionists simultaneously in different parts of the city. The arrests were made at the request of the New York Society for the Enforcement of Criminal Law, which, through a skilful male and a female detective, had secured evidence for the prosecution of the offenders. Some of the accused succeeded in securing bail, the bonds in each case being fixed at \$2,500.

SANITARY INSURANCE.

Dr. G. W. Reeves proposes, in the *Nineteenth Century*, a method of sanitary insurance which has the merit of novelty, and which seems not impracticable.

This plan is that any city or district may organize for itself a sanitary protective and insurance association, founded for the purpose of providing the public with a source of protection against unsanitary dwellings and surroundings. The definite objects would be:

- (1) To examine into the sanitary condition of any building, previous

to tenancy, or after, and to afford skilled advice on hygienic matters or appliances, either on existing premises, or on the plans of proposed arrangements of new buildings.

(2) To issue certificates respecting the sanitary condition of dwelling houses and buildings.

(3) To provide the means by which a cleanly and wholesome state of dwelling houses and premises may be maintained.

(4) The sanitary registration of dwellings.

(5) The insurance of buildings against a defective sanitary condition.

—*Medical Record.*

Editorials.

ELIMINATIVE AND ANTISEPTIC TREATMENT OF TYPHOID FEVER.

WE publish in this number a reprint from *The New York Medical Record*, March 10th, 1894, of an article by W. B. Thistle on this interesting subject. Our readers will remember that a paper by the same author, on this subject, appeared in *THE PRACTITIONER* for April, 1893. In the first paper the author points out that, so far as the treatment of typhoid is concerned, the dictum "knowledge comes, but wisdom lingers," has been most apt. The profession still kept its attention fixed on that vague and intangible something called typhoid, instead of turning to the consideration of some plan to get rid of, destroy, or in some way mitigate, the effects of the parasitic growth which was now known to be the disease. By the long-continued efforts of generations of medical men, working in ignorance of the true condition, almost every medicinal or therapeutic procedure had been advocated, and in time discarded. The unfortunate patients had been bled, purged, sweated, bathed, starved, and fed. When one stops to consider, there are really not many therapeutic channels, if one might so term them. These soon became exhausted. Gradually, a deep-seated distrust of medicinal treatment possessed the medical mind and, curiously enough, this feeling became intensified the clearer the nature of the condition became. It was hard also to get away from the time-honored traditions and precepts. Even when the nature of the disease became as clear as noonday, this let-alone policy prevailed, in utter forgetfulness of the fact that, although the available therapeutic instruments may be few, yet, like the carpenter's axe and saw, if they are intelligently applied, marvellous results may be obtained.

We are sure that the revival of interest which these papers have created cannot fail to be productive of good. The author may be congratulated if he has succeeded in disturbing the lethargy and spirit of helplessness, with reference to this subject, which has possessed the writers and teachers of Europe, and of this country, if one may judge them by their books and

teaching. The quotations from well known and most recent text-books introduced by the author, as well as others which could have been cited, illustrate well this condition of mind. Osler's opening sentence on treatment, for example: "The profession was long in learning that typhoid fever is not a disease to be treated by medicines"; or in the latest edition of Fagge, 1891, we read (page 171) that "no method of treatment has yet been discovered by which the course of the disease can be shattered," and, on page 174, "No qualified man would think of giving ordinary laxatives in enteric fever." On the same page, the author actually congratulates himself that in the case of two patients who had died from hemorrhage while undergoing this let-alone treatment he had *abstained from interference!* It would seem, too, according to the author of these papers, that, in a negative way, we have been aiding in the production of the very condition we most dread; *i.e.*, perforation and hemorrhage. In a recent number of *The New York Medical Record*, Dr. Osler, in a note to the editor, reminds Dr. Thistle that he must not claim the credit of introducing purgation treatment in typhoid, inasmuch as Larroque, of Paris, in 1841, had advocated treatment by purgation. We have not been able to discover Larroque's article, but have read the very brief, but somewhat satirical, review indicated by Dr. Osler in *The British and Foreign Medical Review* for 1841. Dr. Osler does not state where the original paper may be seen. However, if Dr. Osler will read the recent paper, he will find that the author does not claim to have introduced purgation in the treatment of typhoid, but does claim to be the introducer of a plan of treatment directed against the bacillus and its toxic product.

This plan he divides into three parts: (1) Elimination of bacteria from the intestine, and of its toxic product, both from the intestine and, by drainage and flushing, from the tissues as well. Larroque, fifty years ago, knew nothing of the typhoid bacillus or of its product. True, he attributed the disease to the result of decomposition in the intestine, and, therefore, he was close to the truth, and his treatment logical. (2) The author advocates constant efforts to maintain the volume of the body fluids by taking at frequent intervals large draughts of water, as well as nutritious fluids, so as to compensate for that drained off through the intestine. This also facilitates the removal of the poison through the kidney. By this measure exhaustion is prevented, and the poison is kept in diluted and less harmful form. The author lays stress upon this second factor in treatment, holding that elimination can be successfully and safely carried out only when purgation is associated with the injection of large quantities of fluid. Not having seen Larroque's article, we cannot say whether he had such an adjuvant to his purgation; but since he knew nothing of the soluble toxine, nor of the colonies of bacteria producing it

throughout the tissues, it is altogether unlikely that he did. Moreover, the practice in those days was usually to forbid water entirely.

Then, coming to the third factor—the use of antiseptics. Here the author can certainly not claim originality; nor does he. But he points out that it is in association with elimination that antiseptics can be most successfully used; that much larger quantities of antiseptics can be given without danger if, after acting on the bacteria of the intestine, it is shortly carried out than if allowed to remain and become absorbed. We have here an original and valuable suggestion.

However, before leaving the remote literature, we might ask in vain for the disease in which the victims had not, at some time, been bled, purged, or sweated, and this, too, on a purely experimental basis.

Taken as a treatment directed against the bacterial culture in possession of the body, and based upon our present knowledge of the pathology of the disease, the author's plan seems strikingly new. This is particularly true with reference to the later generations of medical men who, while they have been well informed as to the nature of the disease, cannot but be impressed with the newness of a plan of treatment so diametrically opposed to all they had read or been taught.

THE MEDICAL FACULTY IN RELATION TO THE FINANCES OF THE UNIVERSITY OF TORONTO.

THERE has been considerable misunderstanding with reference to the financial aspects of the relations which exist between the University of Toronto and its re-established Medical Faculty. It has been publicly stated that the finances of the University have been sadly crippled, chiefly by the actions of the Vice-Chancellor, in his worthy and successful efforts to establish a strong medical faculty. A complete refutation of such charges is found in the following plain financial statement, which we extract from a letter written by Prof. A. B. Macallum, which appeared in the *Toronto Mail*, February 24th: "In the year ending June 30th, 1887, the amount received by the University in the shape of fees for medical examinations and degrees could not be more than \$1,015; that is, 103 paid \$5 each, while twenty-five, for their degrees, paid \$20 each. The University paid \$705 to the medical examiners, as shown by the bursar's accounts. The University was benefited to the extent of \$310 only, and this in the year preceding the formation of the Medical Faculty. Now, in the financial report of the Board of Trustees, dated November 1st, 1893, page 26, the amount received from medical examinations and degrees is placed at \$3,453.75, and, on page 25, the fees received for the tuition of

medical students in the sciences taught in the Arts Faculty is stated to be \$2,020. The amount received as rent of a part of the west wing of the Biological Department is \$1,200. Adding these together, we get a total of \$6,673.75, all this for the year ending June 30th, 1893. Against this must be placed examiners' fees, \$1,550.80 (report of Financial Committee of Senate, page 11), and salaries to instructors purely for medical students, \$1,100; total, \$2,650.80. The University, therefore, netted, last year, \$4,022.95. Comparing this with what was netted in the year ending June 30th, 1887, immediately before the formation of the Medical Faculty, we see that the University was last year in better position by \$3,712, and all for an expenditure on the part of the University for which the Chancellor, after consultation with the architect on the amount of space used by the faculty, considered that \$1,200 as rent would be a just and adequate allowance."

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

THE Eleventh International Medical Congress was held in Rome, March 29th to April 5th; and, at the time of writing, reports vary as to the amount of success which attended it. As to numbers, there were enough—possibly more; but the arrangements made by the local committee appear to have been good, and strangers were, as a rule, well looked after. In certain respects some of the visitors were "looked after" in a way not altogether pleasant, and not altogether cheap. However, there were a lot of Englishmen there; so, of course, there must needs be a certain amount of grumbling, and a certain amount of "writing to the *Times*."

The International Medical Congress is now generally regarded as a permanent institution, but it is a thing of modern times. The first congress was held in Paris in 1867, the year of its great exhibition. The committee in charge of the ordinary annual assembly of French physicians for that year conceived and carried out the happy idea of sending invitations to foreign members of the profession visiting the exhibition, asking them to attend the meeting and take part in the discussions. Over five hundred foreigners attended, and a number of foreign vice-presidents were appointed. The proceedings were conducted in French, and the meeting was highly successful. On the suggestion of a delegate from Italy, the congress was made a permanent institution, and Florence was selected as the place for the next meeting, which was held in 1869.

The third congress was held in Vienna, 1873; the fourth in Brussels, 1875; the fifth in Geneva, 1877; the sixth in Amsterdam, 1879; the

seventh in London, 1881; the eighth in Copenhagen, 1884; the ninth in Washington, 1887; the tenth in Berlin, 1890; the eleventh in Rome, 1894.

Of these, probably the most notable were the London and Berlin meetings. The London Congress had in attendance over three thousand members, including one thousand foreigners, and had as its president the eloquent and brilliant Sir James Paget. Professor Virchow and M. Pasteur delivered admirable addresses, and were received with an enthusiasm which was almost marvellous for cold, hard-headed Britishers. The Berlin Congress of 1890 was a gigantic, rather unwieldy, but highly successful affair. It is said that Professor Virchow, in the delivery of his presidential address, had an audience of 7,000 persons.

We have had one congress in America—held in Washington, 1887. A number of prominent American physicians extended a very cordial invitation to the members at the Copenhagen meeting, 1884, to come to the United States. The invitation was gladly accepted, and the Americans immediately went to work to organize a committee to make the necessary arrangements. This committee, although composed of able and representative men, was not acceptable to the American Medical Association. There were too many chosen from the eastern cities; there were too few from the "rural districts" and the "woolly west." The "self-appointed" committee was unceremoniously snuffed out; a new "geographical" committee was appointed; a reorganization was effected. A fierce war raged between the two hostile camps, and many of the ablest American physicians would have nothing to do with the congress. The old world looked on in wonder and surprise—and mostly stayed at home. The misunderstanding which caused the trouble was most unfortunate. United America would have furnished a grand congress; divided America did as well as could be expected under the circumstances. The geographical committee worked with considerable zeal, and completed all the arrangements in a most satisfactory manner; and the comparatively few foreigners who attended were much gratified with the treatment they received.

THE DOMINION MEDICAL ASSOCIATION.

WE learn from the secretary, Dr. Starr, of Toronto, that the officers of the Dominion Medical Association are busily engaged in arranging for the next meeting, which will be held in St. John, N.B., in the month of September. It happens that there will be three important meetings of medical associations held in St. John during this year, namely, those of the Canadian Medical Association, the Maritime Medical Association, and the

New Brunswick Medical Society. We learn from the *Maritime Medical News* that there is a strong probability that all these meetings will be held at one time. This will insure a large and representative attendance of physicians resident in New Brunswick, Nova Scotia, and Prince Edward Island.

When the last meeting of the Dominion Association was held in Halifax the numbers in attendance were small. The meeting, however, was a fairly good one from a purely medical point of view, and an exceedingly delightful one from a social point of view. Our friends in the Lower Provinces have big hearts, and know how to entertain generously. A trip to the Lower Provinces from Western Canada is a very pleasant one, apart from any considerations connected with the meeting, and we desire again to urge our readers to keep this fact in view when making arrangements for their summer trip in 1894.

SYMPHYSIOTOMY.

WE have heard much during the last two years about the resuscitated operation of symphysiotomy. The Italians grow enthusiastic over it; the French become almost hysterical about it; some of our American friends are inclined to become sensational over it; some of our Canadian brethren are somewhat excited about it.

Great Britain, as usual, is calmly conservative, and has worked up nothing in the shape of enthusiasm, hysteria, or sensationalism, with reference to the subject. A paper, written by Dr. Harris, of Philadelphia, was recently read at a meeting of the Obstetrical Society of London, entitled "A Plea for the Practice of Symphysiotomy, based upon its record for the last eight years." In the brief discussion which followed, no one expressed a decided opinion in favor of the operation except in an exceedingly small proportion of cases.

Dr. Horrocks reported one case of symphysiotomy which he had witnessed. Since the operation the woman had been unable to do any work, and was now in an infirmary. He thought that craniotomy or Cæsarean section would have been preferable.

Dr. Griffith, who has about three thousand cases of labor annually under his charge, stated that he had not yet found the conditions necessary for its performance present: that is to say, patient in labor, a moderate degree of contraction, with vera not less than three inches, the fetus

alive, and delivery impossible with the forceps properly applied. He believed the total risks of Cæsarean section were less than those of symphysiotomy. The most of the other members who spoke expressed the opinion that Cæsarean section was preferable to symphysiotomy.

It may be that the members present at the meeting referred to took a dark view of the operation, but we must certainly admit that their great practical ability and their large experience add very much weight to any opinions which they may express with reference to this important operation.

Obituary.

JOSEPH WORKMAN, M.D., C.M.

OUR beloved and distinguished friend has gone at last—and yet too soon. He lived eighty-nine years—a long, long lifetime; but the time had not arrived when we felt that we could spare him. This lower world, with all its faults, never gives up, except under compulsion, and with the bitterest pangs, so good a man as Dr. Workman. Who was Dr. Workman, what did he do, and of what sort was he? ask his numerous friends between the Atlantic and the Pacific, and even beyond this continent. We would like to get all their answers and publish the gist of them. What a good book could be made!

He was born in the County of Antrim, Ireland, 1805, his ancestors having come from Gloucester, England, during the protectorate of Oliver Cromwell. Before his birth, and shortly after the close of the War of Independence, his father spent three years in the United States, teaching English in a college in Philadelphia, which afterwards became the University of Pennsylvania; but at the expiration of that time he returned to Ireland, where he remained until the time of his death, when a family of eight sons (including Joseph) and one daughter survived him. Mrs. Workman, the mother, lived to a great age—being 104 at the time of her death.

Young Joseph was bright and clever as a boy, and received a thoroughly good education. When he was twenty-one years of age he was employed in an ordnance survey of the British Isles. After a time he, with some other members of the family, came to Canada, and lived for a few years in Montreal. He studied medicine in McGill University, graduating in 1835, *i.e.*, when he was thirty years of age. He came to Toronto in 1836, and, for four years, conducted a hardware business on King street. When he was thirty-five years of age he commenced the practice of medicine. About

this time he was appointed Professor of Obstetrics and Therapeutics in the Toronto School of Medicine. He continued to practise, and retained his professorship until 1853, when he was appointed superintendent of the Asylum for Insane in Toronto. He held this position for about twenty-five years; and we are informed by those who had an intimate knowledge of the facts that he showed great administrative ability and rare tact, which, in conjunction with his untiring energy and ability as an alienist, enabled him to evolve a thoroughly well-ordered and admirably-conducted institution from a semi-chaotic condition of things.

When he resigned his position in the asylum, at the age of seventy-three, he was, in a sense, old—old in years, but full of energy, full of fire, full of sympathy, full of gentleness, full of goodness—a charming, lovable, and estimable man. He had an almost unique contempt for cant and humbug, and his criticisms of men and things connected therewith were terribly scathing. In a polemical contest the keenness of his satire, the sharpness of his sarcasms, the vigor of his denunciations, made him tremendously powerful—practically invincible—fortified, as he always was, with a righteous cause, for he would have none other.

After retiring from the active duties of asylum life his greatest pleasure, and chief work, was the study of scientific medicine. He contributed many articles in various American, British, and other journals, and furnished many translations from foreign journals—especially the Italian, of which he was very fond. He did all in his power to aid in building up various medical societies. He was president of the Canadian Medical Association in 1878; first president of the Ontario Medical Association in 1881; first president of the Toronto Medical Society in 1878; and also held prominent positions in other societies outside of Canada. Every one enjoyed his papers and addresses. His style of writing was especially happy—clear, bright, and trenchant; his words in debate or discussion were full of wisdom—sometimes kind and encouraging—sometimes sparkling with wit and humor—sometimes earnest and thoughtful—sometimes abounding in satire and sarcasm—sometimes armed with darts which pierced to the very marrow. His kind words were ever ready for the modest and unassuming—especially the young, apart from the exhibition of extraordinary ability in their efforts; his barbed darts were ever ready for the perpetrators of frauds, tricks, and shams—especially the old sinners.

The evening of December 26, 1888, will be long remembered by those who had the privilege of attending the largest and most interesting meeting of the Toronto Medical Society that has ever been held. The important event of the evening was the unveiling of a large portrait in oil of Dr. Workman, the work of the eminent artist, Mr. Foster. In addition to the local mem-

bers of the profession, there were present Dr. William Osler, of Baltimore, and the late Dr. James B. Hunter, of New York, who delivered interesting and admirable addresses. Dr. R. A. Reeve, who was master of ceremonies, did his work very gracefully, delivering at the same time a happy and appropriate address. Dr. Workman was deeply affected, and returned thanks in his own inimitable style for the honor which had been conferred on him by the society. The portrait now hangs in one of the society's rooms in the Medical Council chambers.

The doctor retained his mental faculties unimpaired until the end. During the last two or three years he was comparatively feeble, and since a slight stroke of apoplexy, a few months ago, was confined to bed. He contracted what appeared to be a slight cold, April 13, but on Sunday, the 15th, appeared to be doing well, and chatted cheerfully with a couple of friends who called on him. He grew worse, however, in the evening, sank rapidly, and died about nine o'clock. His funeral, April 17, was attended by his relatives and friends, including a large number of physicians.

A grand and good old man has departed. The records of his labors, which are at the disposal of his friends, fall far short of furnishing anything like an indication of the great and meritorious work which he accomplished. Fortunately, however, there remains for the many who loved and respected him something inexpressibly sacred—a memory of the spotless purity of his life, of the lofty nobility of his character, and of the wondrous kindness of his generous heart.

Book Reviews.

IN the Mathews' *Medical Quarterly* we are pleased to welcome a new journal to the already long list. The first number appeared in January. It is specially devoted to diseases of the rectum, gastro-intestinal disease, rectal and gastro-intestinal surgery. It is edited by Dr. J. M. Mathews, of Louisville, Ky., an eminent specialist in this line. The diseases of the rectum have been common and frequent long enough, but sufficient attention has not been paid to them. A journal that will devote its columns to these diseases, and contain, besides, good original communications and selections from current literature on these subjects deserves to succeed. Its subscription price is \$2.00 per year, and if the future numbers are equal to the first it will be well worth it.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES, 1893. Edited by Charles E. Sajous, and seventy associate editors. Volume V. The following subjects are treated in this volume: General Therapeutics; Experimental Therapeutics; Electro-Therapeutics; Gynecological Therapeutics; Climatology; Balneology and Hydropathy; Hygiene and Epidemiology; Anomalies and Monstrosities; Anatomy and Physiology.

The first volume deals with diseases of the heart, lungs, and pleuras, stomach, pancreas, and liver, peritoneum and intestines, kidneys and bladder, etc., diabetes, fevers, rheumatism, and gout, and affections of the blood and spleen.

The book is full of information, and well up to date. The chapters on the infectious fevers are particularly valuable.

As a whole, the 1893 edition is well abreast with the most recent advances in the various departments of medicine, and the present volume certainly sustains the good reputation acquired by its predecessors.

CONGENITAL AFFECTIONS OF THE HEART. By George Carpenter, M.D., London. 105 pages. John Bale & Sons, 87 and 89 Great Titchfield street, Oxford W., London.

This little book has been compiled by the author from the various demonstrations he has given to his outdoor clinic at the Evelina Hospital. It is written in a short and concise manner, and is illustrated by several cuts. Part of the work is taken up in describing the defects which occur in the development of the organ, and in tracing out the effects of such errors upon the cardiac septa and vessels. The diagnosis, prognosis, and treatment are included in the work. It is a very useful book to those in general practice, and meet those unpleasant cases. The typography and binding are excellent.

A GUIDE TO THE PUBLIC MEDICAL SERVICES. Containing information of appointments in the Home, Naval, West Coast of Africa, Indian, and Colonial Medical Services. Compiled from official sources. By Alexander Faulkner, Sergeant-Major. London : H. K. Lewis, 136 Gower street.

This little pamphlet is of undoubted value to any one who desires to enter any of the above services. It contains all the requisite information as fully condensed as is practicable without impairing its value.

THE AFTER-TREATMENT OF CASES OF ABDOMINAL SECTION. By Christopher Martin, M.B., F.R.C.S., Surgeon to the Birmingham and Midland Hospital for Women. Cornish Bros., New Street, Birmingham.

Mr. Christopher Martin's opportunities for making observations on this subject while assistant of Mr. Lawson Tait have been taken advantage of and put on paper in a very readable form, published originally in the *Birmingham Medical Review* in parts. The papers have been collected into a small monograph, handsomely bound.

Mr. Martin has followed very closely the teaching of Mr. Lawson Tait. He differs with him, however, on several points, and chiefly as to the value of antiseptic measures. We are glad to see that he agrees with most abdominal surgeons as to the uselessness of the thermometer as an aid to the diagnosis of peritonitis, and that he considers classical symptoms of peritonitis described by the older text-books to be very rarely seen in the peritonitis following abdominal operations.

THE STUDENTS' QUIZ SERIES : GYNECOLOGY. By G. W. Bratenahl, M.D., Assistant in Gynecology, Vanderbilt Clinic, New York, and Sinclair Tousey, M.D., Assistant Surgeon, Out-Patient Department, Roosevelt Hospital, New York. All the series edited by Bern. B. Gallaudt, M.D., Administrator of Anatomy, College of Physicians and Surgeons, New York.

This work is intended particularly for students, is nicely bound and well printed. The illustrations are largely diagrammatic, so that they can be more readily understood by the student. The work is taken up systematically, and is presented to the student in a very concise form. In such a work as this it is impossible to criticize the views of the different authors, or to enter into them in detail, and it is only possible to present the subject by adopting the medium course, and avoiding extreme views. If the student expects to find a classical list of symptoms, such as are given for each case, he will necessarily be disappointed, but it is desirable that he should be acquainted with all the symptoms that may occur, though they may not all be present in any one case. The same may be said regarding the classification of the differential diagnoses. The work is admirably adapted to the purpose for which it is written.

A PRACTICAL TEXT-BOOK OF THE DISEASES OF WOMEN. By Arthur H. N. Lewers, M.D., M.R.C.P., Obstetric Physician to the London Hospital. Fourth edition, with one hundred and forty-four illustrations. London : H. K. Lewis, 136 Gower Street, W.C., 1893.

This work has been so frequently favorably reviewed that it needs but little commendation from us. It is a work of great value to the student, and may be

used with much profit by the practitioner. The illustrations are good, and the arrangement of the book is admirable. We think that Dr. Lewers would do well to elaborate his remarks on ectopic gestation, as he has scarcely done himself justice. He refers the reader to many papers and discussions on the subject. With his experience in writing, he could present to the student a better pen picture of the subject than the student could glean for himself by making the search that is recommended.

We are glad to see that Dr. Lewers favors the supra-vaginal amputation of the cervix for cases of cancer beginning in the vaginal portion. He has now done the supra-vaginal amputation of the cervix for cancer twenty-two times without a death, and he feels satisfied that the operation is less fatal than that of total extirpation. We differ from him, however, regarding the uses of rapid dilatation of the cervix. When necessary to dilate sufficiently to admit the finger, he prefers using laminaria tents. We have dilated and explored many a uterus at one sitting, under chloroform (easily within half an hour from the commencement of the dilatation to the termination of the exploration), by using a sufficiently large tenaculum forceps to firmly grasp the cervix and counteract the upper pressure of the finger after the dilator has been removed. We believe the method to be the best that can be adopted. We have no use for laminaria or other tents.

Another chapter on diseases of the bladder and diagnosis of them would be an acceptable addition to this work, including the recent use of the cystoscope, the endoscope, and catheterization of the ureters.

The following books and pamphlets have been received :

NON-MALIGNANT TUMORS OF THE LARYNX. By W. Schipplegrell, A.M., M.D. Reprinted from the New Orleans *Medical and Surgical Journal*.

TRANSACTIONS OF THE AMERICAN PEDIATRIC SOCIETY. Fifth Session, held at West Point, N.Y., May, 1893. Edited by Floyd M. Crandall, M.D.

A MANUAL OF THERAPEUTICS. By A. A. Stevens, M.A., M.D., Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania, etc., etc. 436 pages; price, \$2.25. Philadelphia: W. B. Saunders, 925 Walnut street.

THE YEAR BOOK OF TREATMENT FOR 1894. A Comprehensive and Critical Review for Practitioners of Medicine and Surgery. In a series of twenty-four chapters, by eminent specialists. In one 12mo. volume of 497 pages. Cloth, \$1.50. Philadelphia: Lea Brothers & Co., 1894.

SYPHILIS OF THE INNOCENT, Clinically and Historically Considered, with a Plan for the Legal Control of the Disease. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital, etc. The essay to which the College of Physicians of Philadelphia, in 1891, awarded the Alvarenga prize. 400 pages. New York: Bailey & Fairchild.

A PRACTICAL TREATISE ON NERVOUS EXHAUSTION (NEURASTHENIA), ITS SYMPTOMS, NATURE, AND SEQUENCE TREATMENT. By George M. Beard, A.M., M.D. Edited by A. D. Rockwell, A.M., M.D., Professor of Electro-Therapeutics in New York Post-Graduate Medical School and Hospital, etc. Third edition, enlarged. E. B. Treat, 5 Cooper Union, New York. Price, \$2.75.

Medical Items.

DR. A. R. HANKS, Blenheim, has been appointed associate coroner for the county of Kent.

PROF. HIRSCH, Professor of Medicine in the University of Berlin, died recently, at the age of eighty-three.

PROF. OSLER, of Baltimore, will leave about the end of May for Paris, where he expects to remain for some time.

DR. PYE-SMITH, of London, delivered the first Hunterian Society lecture, February 28th, on "Rational Therapeutics."

PROF. VON PETTENKOFER will resign his chair in the University of Munich at the end of the coming summer semester.

DR. T. CRANSTOWN CHARLES, Lecturer on Practical Physiology at St. Thomas, died in January, at the age of forty-five years.

DR. E. E. KITCHEN, of St. George, sailed for Europe about the middle of March, and attended the meeting of the International Medical Congress at Rome.

MR. HEBERT W. PAGE, of London, will deliver the Harveian lecture of the Harveian Society, London, in November and December next, on "Some Disorders of Nervous Function due to Injury and Shock."

DR. F. MONTIZAMBERT, medical superintendent of the St. Lawrence Quarantine, who has lived in Toronto during the winter months of the last three years, has been promoted to the position of General Superintendent of Canadian Quarantines.

DR. RICHARD C. NORRIS has been appointed physician in charge of the Preston Retreat, in the place of Dr. Joseph Price, resigned. The institution was endowed by the late Dr. Jonas Preston, and had as its first physician in charge Dr. William Goodell.

DR. DANIEL CLARK, superintendent of the Asylum for Insane, Toronto, read a very interesting paper, April 5th, before the members of the historical section of the Canadian Institute on "The Pioneer Gold Hunters of California." Dr. Clark was himself one of these pioneers, and his description of life in the diggings is said to have been exceedingly interesting.

DR. BROWN-SEQUARD, the eminent physician and physiologist, died in Paris, April 2nd, at the age of seventy-six years. He was at one time Professor of the Physiology and Pathology of the Nervous System at Harvard University. He returned to France in 1869, and was appointed a professor in the École de Médecine. In 1890 he made quite a commotion in the medical world by announcing his supposed discovery of a rejuvenating elixir, which he thought was going to do wonders in restoring exhausted vitality, especially to the aged.

DR. WM. LEISHMAN, the distinguished Professor of Midwifery in the University of Glasgow, died February 18th. He was born in 1833, graduated at Glasgow University in 1855, and was appointed Professor of Midwifery in 1868. He retained the position for twenty-five years, when ill-health compelled him to resign. He published his well-known work on midwifery in 1870. There have been four American and three English editions of this work. Dr. Leishman was engaged on a fifth edition when his health gave way, about a year and a half ago.

WE have to announce with very deep regret the death of Dr. J. R. Logan, one of the ablest of our young Canadian graduates, at his home in Grand Forks, North Dakota. He graduated at Trinity University, Toronto, in 1885, standing first in his year, and receiving the University gold medal. After spending a year at post-graduate work in Edinburgh and London, he settled in Grand Forks, where he practised up to the time of his death. As a medical practitioner, he achieved remarkable success, and rose almost at once to the front rank of physicians and surgeons in Dakota. He was honored in many ways by his professional brethren in his adopted country, and also received certain offices from the state. Among the many offices he filled, we may name the following: County physician; superintendent of the county board of health; city health officer of Grand Forks; secretary of the state board of medical examiners; representative of North Dakota at the International Medical Congress, Washington, in 1892. It is hard to conceive how he was able to accomplish so much work in connection with these various offices, when we consider the fact that, during his eight short years in North Dakota, he had, in addition, to attend to a very laborious practice. We learn from the local papers of Grand Forks that he was suddenly cut off in the midst of his work, as he was found dead in his office at 8 o'clock on the morning of March 25th. In private life he was much beloved by those who came into intimate relationship with him, and his numerous friends in Canada will bitterly lament his loss.

PORTRAIT OF DR. HODDER.—One of the most interesting events at the Medical Convocation of Trinity University, April 5th, was the unveiling of the portrait of the late Dr. Hodder, the first dean of Trinity Medical College. Dr. Hodder, who died in 1878, was certainly one of the most distinguished physicians that Canada has known, and his deservedly high reputation had extended far beyond the confines of this country many years before his death. His many friends in Toronto and elsewhere appreciate very highly the action of those who have presented this portrait to the University of Trinity College.

The artist is Miss Edith Hemming, who has lately come to Toronto from Ottawa, and there is a general consensus of opinion that her work in this instance is one of rare merit.

THE *Medical Chronicle*, of Manchester, England, has been transferred to the Owens College, and will in future be conducted by the professors and lecturers of the Medical School.

OPHTHALMIC HOSPITALS IN DUBLIN.—Endeavors are being made to bring about an amalgamation of the two ophthalmic hospitals in Dublin, the National Eye and Ear Infirmary and St. Mark's Ophthalmic Hospital.

FATAL FOOTBALL ACCIDENT.—Another fatal football accident has happened in England. Sub-Lieutenant Arthur William Richmond, son of Dr. Sylvester Richmond, of Kent County, received an accidental blow on the abdomen, February 9th, which caused his death in forty-eight hours.

TRINITY MEDICAL ALUMNI ASSOCIATION.—At the annual meeting of this association held in Trinity University, April 4th, the following officers were elected: President, Dr. G. A. Bingham; vice-presidents, Dr. Milner, of Toronto, and Dr. Milner, of Enniskillen; general secretary, Dr. E. Clouse; general treasurer, Dr. H. Pepler; auditor, Dr. Allen Baines. A very successful dinner was held on the same evening at the Rossin House.

THE physicians of the Prince Edward, Hastings, and Lennox territorial division held a meeting in Belleville, March 30th, and formed an association. The following officers were elected: President, Dr. Ruttan, Napanee; vice-president, Dr. McKenzie, Trenton; secretary-treasurer, Dr. Bowerman, Picton; executive committee, Dr. Eakins, Belleville; Dr. Macaulay, Frankford; Dr. Thornton, Consecon; Dr. Kidd, Picton; Dr. Spragge, Stirling.

UNIVERSITY OF PENNSYLVANIA.—The medical faculty of the University of Pennsylvania occupies a deservedly high position in the medical world. We learn from the *University Medical Magazine* that the total number in attendance during this session is eight hundred and one. Last year the number was eight hundred and forty-six, under the old regulations, which allowed students to attend the final examinations after an attendance on three sessions. The compulsory four years' course came into operation during this session, and the friends of that institution will be gratified to know it has not materially reduced the numbers of students, which are larger than those in any other medical school in America.

MEDICAL FEES IN FRANCE.—M. Dumontpallier sued a notary of l'Aisne, whose wife he had treated in 1892, before the civil tribunal of the Seine, to recover an honorarium of 1,500 francs. The lawyer, who had already tendered 700 francs, pleaded that this sum was sufficient. Hence the action. Having heard the advocates on both sides, the tribunal delivered judgment, basing its decision on the following grounds: "Seeing that in a question of medical fees the points to be regarded are the pecuniary situation of the patient, and the repute which the doctor may have acquired through his labors and his discoveries; and considering in the present case the position of the patient's husband and the medical eminence of Dr. Dumontpallier, the sum demanded is not excessive." The tribunal accordingly condemned the attorney to pay the fee of 1,500 francs in full.

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Original Communications.

THE STUDY OF ANATOMY BY FROZEN SECTIONS.

By A. PRIMROSE, M.B., C.M., EDIN.; M.R.C.S. ENG.,

Associate Professor of Anatomy in the University of Toronto, Surgeon to Hospital for Sick Children, Assistant-Surgeon Toronto General Hospital.

THE modern teacher of anatomy considers it essential that the student should have at his disposal a series of sections of the human body, in order that he may form an accurate conception of the true relations of the various structures which he discloses during the process of dissection. It is impossible to obtain a comprehensive grasp of this important subject of the medical curriculum without recourse to such sections. This method of study, as already indicated, is of comparatively recent development in the study of the science. Its utility and importance, however, are readily conceded by any one who has examined a series of preparations. It is not

beyond the mark to say that the majority of graduates of medicine practising in Ontario have never had the opportunity of examining sections, and these gentlemen are not exceptional, for it is only within the past few years that sectional anatomy has formed a prominent feature in the instruction given in any medical school. Dissection is, of course, all important, and the study of sections is always supplemental ; it is none the less essential. It is impossible to insist too strongly on the necessity for careful and conscientious dissection on the part of the student. The dissecting room is an excellent training school for accuracy of observation and for methodical work. Here, to a great extent, the character of the student is moulded early in his career ; and if proper supervision be not exercised, the student is prone to contract slovenly methods of doing his work, which will stick to him throughout his entire course. Above all things, therefore, one must insist upon careful dissection. There seems to be an inclination on the part of some to conclude that dissection is the *only* way of studying anatomy. This ground has been taken by certain teachers abroad, but why they should decry the use of such important accessory methods as thus afforded by the study of sections it is difficult to understand.

This subject is dealt with by Professor Macalister, Professor of Anatomy in the University of Cambridge, in an address delivered recently to the Medical Society of University College, London, on "Methods of Anatomical Study." Professor Macalister is one of the most progressive teachers of anatomy of the day, and of great experience as a teacher. I quote from his paper at considerable length. In considering "the limitations of the utility of dissection" he says, concerning that stage of study in which comparison of the part dissected is made with the same region as shown in frozen sections : "One school of teachers tells us that dissection is the only way to learn anatomy, but there are some things dissection cannot do. It cannot show you the relations of undisturbed parts, which is of the very essence of surgical anatomy. As the name implies, dissection is the art of taking parts asunder ; it is essentially analytical. When carried out properly, dissection is the art of removing connective tissue from around parts so that they can be severally seen. The most skilful anatomist, when he opens the body cavities, must displace the viscera in relation to the landmarks, and cannot avoid doing this to such an extent that, like the fallen Humpty Dumpty, all the members of the anatomical societies of Great Britain and Ireland cannot put them back again the way they were before. Here the careful comparison of our dissections with the sections of undisturbed parts comes to our aid. These sections are not mere superfluities—ornamental adjuncts to a dissecting room ; they are necessary parts of the teaching apparatus in any properly

equipped school. If sections are not available, properly constructed models of them are the next best thing to help us. In a recently published pamphlet, an eminent anatomist has ridiculed the use of these by saying that the parts as seen in the models do not correspond to the parts as seen in the dissecting room, and he is right ; for we see the parts in the anatomy room not as they were, but as our disturbance has made them. Take, for example, the flattened liver, as you see it on the table, and compare it with the liver of the frozen body, or with Steger's* model of it. The former presents a form which the organ could not possibly assume in its normal position when pressed upon, faceted, and moulded by the surrounding viscera and muscles. Take also the pancreas. You know it, as shown in sections or in the model, to be quite a different thing from the long tongue-shaped gland formerly figured in so many text-books. But the liver and pancreas of the model are the organs as they exist in the condition with which the physician has to deal, and it is in these forms that these organs must be known if we are to use to our advantage our anatomical knowledge for clinical purposes. Dissection is the only way of learning structure and details ; sectional study is the only way of learning relations."

Our knowledge of the topographical anatomy of the body has been greatly increased since the introduction of this method of studying sections prepared by freezing. The first work of importance done by this method was that by Professor Pirogoff, of St. Petersburg, which led to the publication of his work on the subject in 1859.† Later there appeared the well-known work of Professor Braune, Professor of Anatomy in the University of Leipsic, who published his atlas of "Topographical Anatomy" in 1867-69. Among the earlier publications on this subject, we must rank the work entitled "Frozen Sections of a Child," by Professor Dwight, of Harvard University, which appeared in 1881, and is illustrated by plates of a series of very successful sections made of a child three years of age.

In 1887, there appeared from the Edinburgh school one of the most important of recent contributions to the subject of anatomy in the elaborate and beautifully illustrated monograph by Mr. Johnston Symington, entitled "Topographical Anatomy of the Child."‡ Within the last few years valuable work has been done in the study of frozen sections by a host of investigators. The pioneers in this particular line of study have

*A series of Steger's models are exhibited in the anatomical department of Toronto University. They are reproduced from sections made by Professor His, of Leipsic.

† See Professor Symington's address delivered at Queen's College, Belfast, *The Lancet*, Nov. 4th, 1893, p. 1108.

‡ Mr. Symington, who was, at the time of publication of his work, lecturer on anatomy in the School of Medicine, Edinburgh, is now professor of anatomy in Queen's College, Belfast.

appeared chiefly in the continental and Edinburgh schools. On the continent Braune and His are the better known contributors to the subject. Professor Cunningham, of Dublin, has not merely confined his attention to sections of the human body, but has extended his researches into the field of comparative anatomy, and has contributed to science the result of his study the sectional anatomy of anthropoid apes. The gynecologist and the obstetrician are indebted very greatly to the application of this method in studying the relations of the pelvic viscera ; and here, again, we are greatly indebted to the work done in the Edinburgh school, represented chiefly by Freeland Barbour, Berry Hart, J. W. Ballantyne, and J. C. Webster. The method has also found application which has proved of great value in surgical work. Thus as long ago as 1878 Dr. Garson published * in the *Edinburgh Medical Journal* an article in which he showed that he had proved by means of frozen sections the effect of distension of the bladder and rectum on the prevesical fold of peritoneum. Garson proved conclusively that simultaneous distension of the bladder and rectum raised the bladder and peritoneum out of the pelvic cavity, and permitted suprapubic cystotomy without opening the peritoneal cavity. Garson's original plates were reproduced by me in my paper on "Suprapubic Lithotomy," published in *THE CANADIAN PRACTITIONER*† in 1889.

The object of the present paper is simply to demonstrate the value of frozen sections as an adjunct to dissection in the study of human anatomy. It has occurred to me that my purpose may best be served by publishing a series of plates reproduced from photographs of a series of sections which have been prepared by me, and are exhibited for the use of the students in the dissecting room of the University of Toronto. Most of these preparations were made by me, with Dr. Starr's assistance, about two years ago, and since that time additions have been made to the collection. The collection represents sections in both vertical and horizontal directions, and affords opportunity for the study of all parts of the human body, including not only visceral anatomy, but also the anatomy of the joints and the epiphyses. It is, of course, possible, in this short paper, to give but a few illustrations, but these will suffice to demonstrate the point. Our method of utilizing these sections is, in the first place, to have them always at hand, so that the student may have the advantage of studying them at any time, and comparing them with his dissection ; and, secondly, we have prepared lantern-slides from photographs, these we throw upon a screen by means of a projection-lantern, and thus we are enabled to demonstrate the sections to large classes of students. The plates illustrating the present paper have been prepared from a series of

* *Edinburgh Medical Journal*, October, 1878.

† *Canadian Practitioner*, June 17th, 1889.

most successful photographs taken by Dr. E. E. King. It will be impossible to describe in detail the individual plates, but the reader will recognize the more important structures depicted therein, and will appreciate my contention as to their utility in the study of human anatomy.

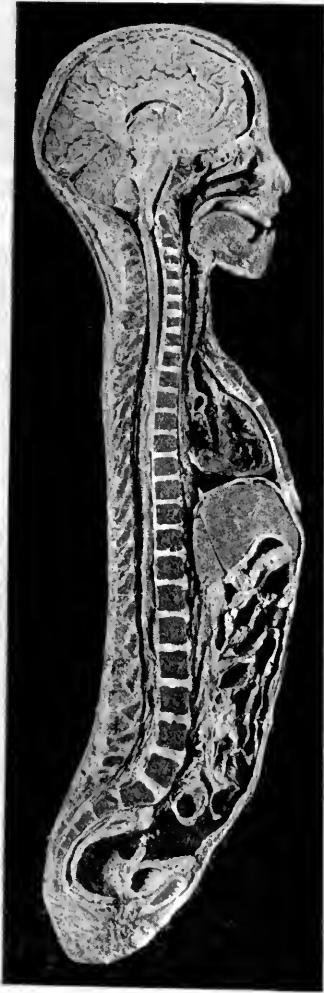


FIG. 1. Vertical mesial section of the body of a girl aged nine years.

The immature condition of the skeleton is shown by (1) the persistence of a line of cartilage between the odontoid process and the body of the axis vertebra ; (2) a thin layer of cartilage between the basi-sphenoid and basi-occipital ; and (3) the cartilaginous intersections between the component parts of the body of the sternum. The frontal and sphenoidal sinuses are well developed in the skull. The meatuses of the nose are shown, and a mesial section of the tongue, palate, and jaws.

There has been a slice removed from the inner surface of the left cere-

A longitudinal section of a girl nine years of age is shown in Fig. 1. The section is a little to the left of the middle line, so that the falx cerebri and the nasal septum have been removed. The normal curves of the spinal column are clearly indicated, although they are not very pronounced. No doubt the fact that the subject lay upon its back whilst being frozen accounts for the comparatively straight spine. The curves of the spine are exaggerated, during life, when the individual is in the erect posture ; the weight of the body tends to produce this. On the other hand, when one lies supine the spine becomes comparatively straight, although the curves are by no means wholly obliterated. The sacrum, of course, preserves its well-marked curvature. The spinal canal is opened up, and the cord, divided in longitudinal section, is exhibited with the cauda equina. Note the difference in the degree of obliquity of the individual spinous processes.

The immature condition of the skeleton is shown by (1) the persistence of a line of cartilage between the odontoid process and the body of the axis vertebra ; (2) a thin layer of cartilage between the basi-sphenoid and basi-occipital ; and (3) the cartilaginous intersections between the component

bral hemisphere, and the cavity of the lateral ventricle has been opened up, and presents itself as a crescentic slit about the centre of the brain. The relations of the cord, medulla, cerebellum, and cerebrum are well illustrated. The position of the larynx and trachea is shown. The tip of the epiglottis is on a level with the disc between the second and third cervical vertebræ. The isthmus of the thyroid gland is seen on section in front of the trachea, opposite the lower border of the sixth cervical body. The œsophagus is not observable ; it is, of course, flattened, and is, in the greater part of its course, to the left of the mesial line, and there is no definite indication of it in the plate. In the thorax the heart and great vessels are seen, and the diaphragm demonstrates the lower limit of the chest cavity. Immediately below this is the liver. On the under aspect of the liver is observed a small portion of the stomach, and below this the intestine. In the pelvis there is a cavity between the intestines above, the rectum behind, and the uterus and bladder in front. This cavity was filled with a mass of débris, and the peritoneum in the locality was covered with flaky material. The girl had died from typhoid fever, and there had evidently been peritonitis and probably a purulent collection in this locality ; possibly this indicates the cause of death, but, unfortunately, the clinical history was not obtainable. The bladder was partially distended. The uterus was, of course, small and infantile in character.



FIG. 2. Horizontal section at the level of the second dorsal vertebra of the body of a girl aged six years.

The remaining plates are representations of a series of transverse sections of a child six years of age. Fig. 2, a transverse section through the body of the second dorsal vertebra, in which the clavicles are split longitudinally. That bone on the left side is seen on section throughout its entire extent, whilst the section was a little lower on the right side, and the lower portion of the bone in its inner half is observed. The extent to which the apices of the lungs extend above the clavicles is indicated, the

lungs appearing on section on each side of the vertebral body. Immediately in front of the vertebral body is seen the trachea, behind which, towards the left side, is the œsophagus, which was not entirely empty at the time of cutting, and presents an irregular outline. The great vessels at the root of the neck are clearly demonstrated in the preparation, but they have not been well reproduced in detail on the plate. It will be observed that the three primary centres of the vertebra have not yet united, the neuro-central sutures being still evident.

Fig. 3 is a section through the fifth dorsal vertebra. This is a most instructive specimen. It is one of those sections which proves a pleasure and satisfaction to a student who has faithfully done his dissection, and



FIG. 3. Horizontal section at the level of the fifth dorsal vertebra.

turns to study the preparation, taking pains to recognize each of the structures which appear in detail. In front of the body of the vertebra, towards the left side, is seen the descending aorta, and lying between this and the vertebra, almost in the middle line, is the œsophagus. On each side the bronchus is seen on section, and in front of these structures the pulmonary artery is beautifully shown as it leaves the right ventricle and divides into the right and left pulmonary arteries. Immediately to the right of the pulmonary artery, before its division, is seen the first part of the aortic arch, and to the right of this again the superior vena cava. A portion of the right iliac appendix lies towards the front. The lungs are evident, occupying a position laterally. Lastly, the humerus is divided transversely, and appears at the sides of the section.

Fig. 4 represents a section through the ninth dorsal vertebra. It illustrates well the relations of the heart to the lungs within the chest cavity.



FIG. 4. Horizontal section at the level of the ninth dorsal vertebra.

The cavities of the heart are opened up, and the descending thoracic aorta is evident. The pericardium is clearly demonstrated, and the shape and



FIG. 5. Horizontal section at the level of the tenth dorsal vertebra.

connections of the lungs in their relation to the heart are well brought out. The cartilaginous inferior angles of the scapulæ are shown, and the ribs are cut obliquely, and appear in the section.

Fig. 5 is another most instructive specimen, and is a revelation to those who have never studied sections. It is through the tenth dorsal vertebra, and illustrates the position of the lungs, diaphragm, liver, and stomach. In many text-books the highest portion of the stomach is described as the œsophageal opening. The section, however, shows that the fundus of the stomach rises under the left dome of the diaphragm to a considerably higher level, and even in this child, in whom the stomach was empty, the fundus ascends higher than the level of the œsophageal extremity; and in the section will be found a section through the œsophagus distinct and separate from the section through the fundus. The aorta appears in the section, and the vena cava is observed almost surrounded by liver substance. The section has passed through the bases of the lungs posteriorly and these are represented as two crescentic structures

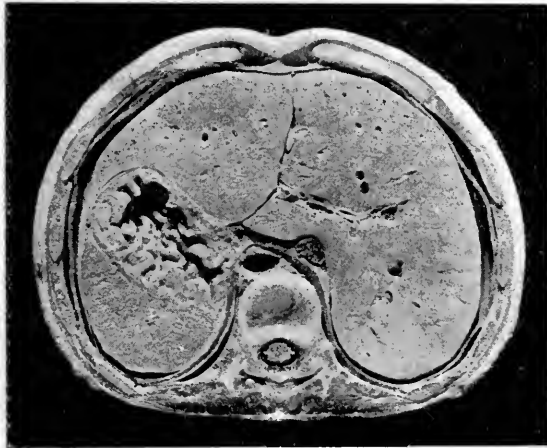


FIG. 6. Horizontal section at the level of the disc between the eleventh and twelfth dorsal vertebræ.

one on each side of the vertebra, separated by the diaphragm from the abdominal viscera.

Fig. 6 represents a section at the level of the disc, between the eleventh and twelfth dorsal vertebræ. The relations of the liver, stomach, and spleen are shown. The stomach is almost empty, and therefore appears in a contracted condition, whilst the liver passes over to the left side of the body, in front of the stomach. I have a section in my possession in which the stomach was much distended at the time of cutting. In it the liver has been pushed towards the right, and does not occupy nearly as large a portion of the section. The extent to which the liver passes to the left depends upon the degree of distension of the stomach. In contraction of the stomach, the left extremity of the liver may even lie between

the diaphragm and the spleen. The aorta and inferior vena cava may be readily recognized. The diaphragm can be traced around the greater part of the section, a portion of it intervenes between the aorta and the vena cava. The section is immediately above the aortic opening in the diaphragm, and considerably below the level of the opening for the vena cava; consequently the section of the aorta appears behind (or above) the diaphragm, whilst the section of the vena cava appears in front (or below) that structure.

Fig. 7 is through the first lumbar vertebra. In it we have the liver, spleen, pancreas, kidneys, and intestine. The relations of all these structures are beautifully brought out. One gets an impression of the intimate relations maintained between these viscera which it is impossible to grasp

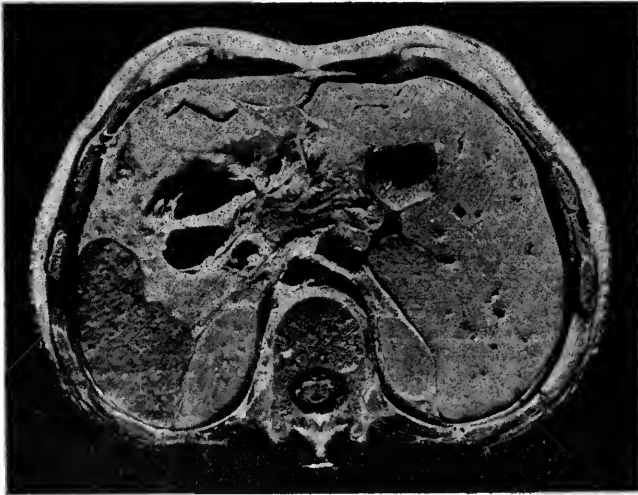


FIG. 7. Horizontal section at the level of the first lumbar vertebra.

by mere dissection. The shape of the liver, as demonstrated in the complete series, is very different from that obtained from the appearance presented by the flattened organ removed from the body and placed upon the dissecting table. This remark applies also to the pancreas. The relation of the spleen to the left kidney and the pancreas, as shown here, is clearly demonstrated, and depicts a close relationship not always described.

Fig. 8, a section through the disc between the second and third lumbar vertebrae. The relations of the kidneys are further shown here, and their parietal connection depicted. The liver appears also in this section, and to the left of the diagram the transverse colon is opened. The aorta is again seen, and portions of the intestine.

Fig. 9. Here the relation of the kidneys at a lower level are brought out. We are now below the level of the liver, and we have here well shown the relation of the kidneys to the ascending and descending colon. The remaining portions of the abdominal cavity are occupied by small

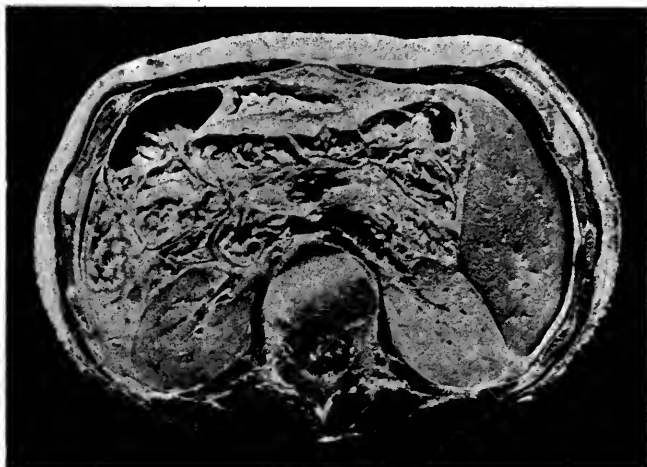


FIG. 8. Horizontal section at the level of the disc between the second and third lumbar vertebrae.

intestines. The section is through the disc, between the third and fourth lumbar vertebrae. The cauda equina is seen occupying the spinal canal.

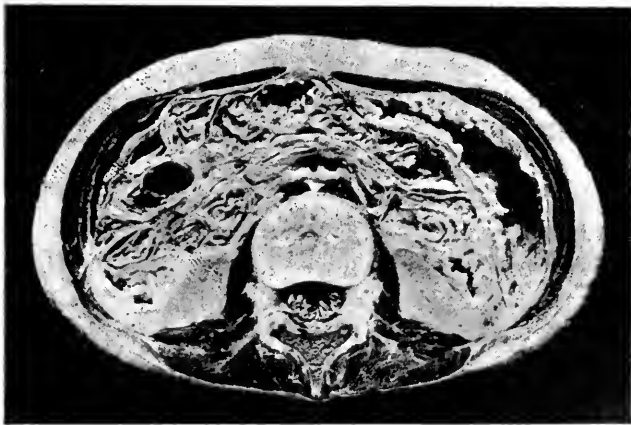


FIG. 9. Horizontal section at the level of the disc between the third and fourth lumbar vertebrae.

Fig. 10 is also an instructive specimen, chiefly useful in illustrating the position of the colon on each side, and the relations here borne to the abdominal parietes. This section is made in the region where lumbar

colotomy is performed. The section is through the body of the fourth lumbar vertebra.

The description I have given of the plates has necessarily been very meagre, but I think it has been sufficient to serve my purpose, and to indicate the advantage obtainable by a systematic study of such preparations. Of course, the actual sections are immensely more valuable than



FIG. 10. Horizontal section at the level of the fourth lumbar vertebra.

the plates, however successful the method of reproduction may be. The details can be much more fully worked out in the study of the actual sections. For instance, one can readily study the individual muscles in such a region, as that about the shoulder-joint and axilla. They are clearly differentiated, and afford a field for most instructive work on the part of the student.

The introduction of the study of frozen sections in the anatomical department of a medical school has become an absolute necessity, and it is a method highly prized by the student who turns to the sections, after his dissection has been completed, with much enthusiasm, and finds the study to be not only profitable, but a source of real pleasure to him.

CHRONIC URETHRAL DISCHARGES: THEIR DIAGNOSIS AND TREATMENT.*

BY EDMUND E. KING, M.D., L.R.C.P. LOND.,

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Assistant Pathologist, Toronto General Hospital.

GENTLEMEN,—On the above subject I do not expect to be able to tell you anything that has not been told before, but I hope to be able to present to you some facts that, although well known, are by no means widely known. Unfortunately, this subject is sadly neglected, and sometimes even misunderstood, to such an extent that Fenger, in his monograph, says : “We venture to assert boldly that there is no department of general medicine in which such unscientific and routine treatment is adopted as in the case of blenorrhea. A clap syringe of tin, hard rubber, or glass, and a collection of thirty to forty recipes for injections, are the entire armament of the large majority of physicians. Certainty of diagnosis by examination of the pus and urine, the methods of visual examination of the urethra, are usually ignored in the pathology and treatment of gonorrhea.”

Therefore we can be prepared for an unusual number of cases which develop into chronic urethritis.

Fenger gives his definition thus : “The acute disease passes through the muco-purulent and muco-terminal stages before recovery ensues. This stage may become permanent, and it is to this protracted symptom—complex, of the terminal stage of acute blenorrhea—that we apply the term chronic blenorrhea” ; while Ultzmann defines it as “all cases that exist longer than eight or ten weeks.” With these definitions we can be satisfied, on account of the wideness of their scope.

The pathological changes which take place in the urethra are numerous, and, unless they are clearly recognized and well understood, we need not anticipate brilliant results to follow the treatment adopted.

The chronic disease, which we shall alone look at to-night, may be due to a general pathological change of the whole mucous membrane of the

* Read before the Toronto Medical Society.

urethra, or to isolated patches of denuded surface, or granulation ; it also may be occasioned by an alteration of the calibre of the tube, such as by Otis called strictures of "large calibre."

The granular form of urethritis was first described by Desormeaux, who regarded it as the sole cause of chronic urethritis, and the productive cause of the "morning drop" and the pus shreds. He was also of the opinion that it existed in the deeper portion of the urethra alone, although we have since discovered that it can exist as well in the anterior portion. The pathological appearances in the granular form resemble very much the granular condition of the conjunctiva, although the color differs in degree. The existence of strictures of large calibre, which are a frequent, if not a universal, cause of chronic urethritis, was first brought to the attention of the profession by Otis, of New York, in 1870, who inaugurated a material change in the treatment of these cases. When the "morning drop" is the principal symptom complained of, the urethra should be examined first for large calibre strictures, then for other pathological changes, previous to forming an opinion as to the cause or curability of the disease. The "morning drop" as a symptom may almost be regarded as pathognomonic of stricture. Sir Henry Thompson, in his work on "Stricture of the Urethra" (page 87), says : "Indeed, the existence of a long-standing or obstinate 'gleet,' as such chronic discharges are termed, should always arouse inquiry for stricture. . . . This symptom has been so prominent that the patient has been treated for gonorrhea during a considerable period without suspicion arising that a stricture existed, which was the sole cause of the trouble." Also, when speaking of a case of stricture, he asserts that "the earliest symptom usually noticed by the patient is a little gleety discharge, almost constantly present in more or less quantity." All gleety discharges and so-called "morning drops" are not necessarily blenorrhagic. Those of a purulent character differ from those of a clear viscid discharge. The latter sometimes come from the prostate of those who have had severe disease, and also from those who indulge in sexual excesses ; they should be termed simple uorrhœa, arising, as they do, from a hypersecretion of the prostatic and other glands. We should go into details of the patient's action and his thoughts. There can be no doubt about lascivious thoughts and action other than intercourse having a very marked effect upon the patient. We are very often told by the patient that he has had no intercourse for some weeks, but he fails to inform us, unless we cross-question him closely, that he allows himself to be the victim of almost continuous erection. With all erection there is a passive congestion, and if these are continued for a long term there must be more or less of a clear viscid discharge.

I intend to confine my remarks more to the diagnostic and therapeu-

tical aspects of the disease, and shall content myself with the foregoing for pathological changes, although these changes must be intimately known before we can appreciate the endoscopic pictures.

A patient who consults us regarding a chronic discharge should always be subjected to a very thorough local examination. The urine should be examined to discover the presence of gonorrheal shreds. These are in themselves of diagnostic importance in determining the extent of surface implicated, but not in locating, as was and is now frequently taught, the site of disease. The patient should be directed to pass urine into two glass vessels; in the first an ounce or two will be sufficient, and, in the second, a like amount will answer. Should the second glass contain clear urine, the discharge arises from the urethra anterior to the bulb, but it will contain some shreds and comma specks if the prostatic urethra be involved. These shreds can readily be distinguished by their large size, and a tendency to immediately fall to the bottom of the vessel, while those composed of mucus will continue to float for some time. They are easily examined under the microscope, and are seen to consist of pus and epithelial cells, or of either separately. They do not exist as such in the urethra, but are formed by the rolling over and over of the sticky discharge during micturition. In all cases of chronic discharge where the shreds are found, no matter how limited in quantity, an examination should be made for gonococci. If the patient contemplate matrimony, and the gonococci are observed, it is the duty of the surgeon to advise against the marriage until a cure be accomplished, on account of the evils that may follow; the gonococci often exist in very minute quantities, but so long as they are present a fresh inoculation may occur at any time. Should the examiner be undecided in regard to their existence, his duty lies in the line of increasing the discharge by injections of nitrate of silver, and again examining for the germs.

We also find a condition in which the urine in the second glass, as well as that in the first, is very cloudy, a sediment, either flocculent or white granular, is formed on standing. The cloudiness often leads to an erroneous diagnosis of vesical catarrh, but when the urine is examined microscopically and chemically we find it to contain phosphate and carbonate of lime, the former amorphous, the latter in wedge-shaped crystals. The urine is feebly acid, neutral, or feebly alkaline, thus increasing the suspicion of cystitis. On adding a few drops of acetic acid, however, the urine clears up and completes the diagnosis of phosphaturia. Now the calibre of the urethra should be tested by means of bulbed sounds, or Otis' urethrometer. If the meatus will admit of a larger size than No. 17 F., the urethrometer had better be employed; it should be passed as deeply as possible, and expanded to, say, 30 F. or 34 F., then gradually withdrawn

until it comes in contact with some obstruction, when the screw should be lowered till it will allow the passage of the instrument through the stricture. The distance from the meatus to the commencement of the stricture and length of the stricture are to be noted, and the size once more increased to the original. This manoeuvre should be continued until the whole urethra has been examined ; thus an intimate knowledge will be gained of the calibre of the urethra, and the locality that must be treated. We must bear in mind that the calibre is not uniform throughout, being narrowest in the membranous urethra.

If the meatus be smaller than 17 F., and a bulbed sound of that size passes unobstructed into the deeper urethra, the meatus should be slit to admit 30 F., and a full-sized bulb passed, or the urethrometer used. In a majority of cases the patient will complain that at some particular portion of the urethra a peculiar sensation is caused by the passage of the urine, or even at other times. While the patient's location of this spot may not correspond to the situation of the disease of the urethra, it attracts the attention of the surgeon to the pathological condition which should receive attention. If no stricture be found, we ought to employ some instrument by means of which the interior of the urethra may be investigated by the eye. In this we are far in advance of our confrères of a few years back. They had endoscopes, but their instruments were cumbersome and costly, so that few availed themselves of their advantages, but continued to treat the chronic discharges on the old and time-worn plan.

The optical examination of the urethra was first practised by Bozzini in the early part of this century. His endoscope was carefully constructed, but was looked upon with little favor, and had almost been forgotten when Segalis, in 1826, constructed a very similar apparatus. Next, the English surgeon, Avery, in 1840, constructed an endoscope. Following this several instruments of less notable construction were placed before the profession, those of Malherbe, Espezel, and Cazenave. This brings us to the end of the first half of the century. Then a new series of instruments was introduced by Desormeaux. In 1853 he brought to the notice of the Academy of Medicine in Paris his endoscope, which, though large and clumsy, introduced a new era in the construction of such appliances. Cruise, of Dublin, made, in 1865, a modification of Desormeaux' instrument, and placed it before the profession. The same, with a slight modification, was used by Christopher Heath in the Lock Hospital for some time. These instruments were, in their turn, modified, until 1879, when the electric endoscope was first constructed.

The numerous lights put into this service have been : sun, candle, lamp, calcium, and Drummond, with plane or concave reflectors. A great drawback to the use of these instruments, and one which was not

corrected till some time after the electric apparatus was introduced, was in the fact that the tube which passed into the urethra, and the source of light, had to be detached in making applications to the urethra, thus making the manipulations exceedingly painful and awkward. The light was not thoroughly under the control of the operator, and he could not regulate its intensity, which point alone was a great detriment to the careful study of pathological changes, some of which must be viewed with much stronger lights than others. This can now be regulated from the battery. In the construction of the electric endoscope, as we have it to-day, all these inventions and modifications have been utilized, the result being a simple apparatus, capable of great control of the light.

The one I have now before me is Leiter's modification of Neitz's. It consists of short endoscopic tubes fashioned after Steurer's, at the ocular end of which is applied the easily-handled illuminating apparatus by means of its funnel-shaped end. The illuminating apparatus is connected by two wires with the battery, and consists of an arc lamp, and behind it a fixed concave mirror, which throws the rays of light parallel into the funnel, and through this into the endoscope.

The eye of the observer looks over the rim of the mirror into the funnel, and tampon brush or other instruments are introduced in the same direction.

As a means of making a clear and positive diagnosis in these cases, there is no instrument to take the place of the endoscope. Its use is surrounded by an air of simplicity that is deceptive, but, like the study of ophthalmoscopy, the pathological changes must be known to be recognized. This, of course, requires constant practice and ample material, but when once acquired the results will fully repay for the trouble taken.

The urethra, anterior of the bulb, should be examined first, and to do this the tube is passed through the urethra, along the upper wall, to the membranous portion, and then, withdrawing the obturator, the lighting apparatus is attached, and the examination is begun from behind forward. The field of vision may be obscured by the secretions, mucus, pus, blood, or by the oil used for lubricating the instrument. A cotton-wool applicator should be used to clear the field of vision, without separating the lighting apparatus from the tube. The instrument should be withdrawn, not continuously, as one might suppose, but by short stages, and the field thoroughly examined before proceeding further. This manœuvre may seem a small detail, but changes are wrought in the color of the mucous membrane by the continuous pressure, and occur quickly as the tube is withdrawn.

If the disease be discovered in the portion anterior to the membranous urethra, the more painful operation of examining the deeper urethra may

be unnecessary ; but, if not, the instrument should be passed continuously until urine trickles along the pipe. The patient may either lie down or stand for the primary examination, and, should the deeper one be necessary, the patient should be placed in the lithotomy position.

Through the endoscopic tube, we notice that the mucous membrane passes from the rim of the endoscope like a cone or funnel. The color of the mucous membrane is darkish red in the deep urethra, surface smooth and rigid longitudinally. The color changes as we pass outward, and is of a much paler red in the pendulous portion. In chronic urethritis the greater portion of the mucous membrane remains as normal, but there are certain modifications from swelling, inflammation, and granular spots. If the swelling be great, the mucous membrane may even project into the tube. If stricture be present, we lose this funnel-shaped condition of the mucous membrane, and it remains rigid. Various shades, from red to dark-red and bluish-red, are the distinguishing points of the granular condition of the urethra, and the surface shows a velvety roughness. These changes may occupy a large surface, or may appear as small circumscribed patches. Other conditions, such as fungous proliferations, polypi, and ulcerated spots, may also be distinguished.

The simple endoscope, with head mirror to reflect either gas or sunlight, answers a very useful purpose for those who have not the electric apparatus ; and, from its simplicity of use and inexpensiveness, I should advise all who treat these diseases to become possessed of one.

Treatment. Internal and local. Of the former, Berkeley Hill says : "For medical treatment I have little benefit from drugs." With this opinion I quite agree. The internal treatment of chronic discharge is a very unsatisfactory way of handling the trouble, and of itself would never cure the disease ; it must be treated locally. The actions of the balsams and sandal-wood oil, in the acute stages, is of use only in rendering the urine aseptic and bland. The secreting condition of the urethra is very different in chronic cases where the discharge is small, and not always of specific nature.

If these drugs had no deleterious effect, we could wish for nothing better ; but we are aware of the injurious influence upon the kidneys, stomach, and skin, when continued for a lengthened period, not to speak of those isolated cases in which albumaria arises, such as are mentioned by no less authority than the late Robert Ultzmann.

We have recently had a drug—salol—highly extolled for its action in rendering the urine aseptic ; at the same time having no deleterious action on the digestive system, and no systemic symptoms resulting from its use. The drug, which is tasteless, is a product of the carbohydrates ; but, like all new drugs, has had what might be termed a "run" on

it. It has not entirely disappointed us, however. While in the cases in which it has been used it appears to have given great satisfaction, yet we must not expect too much from its use, although in combination with boracic acid its effect is pronounced.

The local treatment of that portion of the urethra situated anterior to the bulb differs, in many respects, from that of the prostatic portion. The anterior alone being the seat of stricture is, therefore, amenable to the pressure treatment of Otis, while instrumental treatment in the prostatic urethra is likely to do more harm than good by possibly relighting an acute attack. In the anterior urethra the Otis treatment should first be used if any coarctations exist, and should be carried on until No. 27, at the least, is reached, and No. 30 F. should be used, this being the average normal calibre. The slight slitting of the meatus to admit a No. 30 is a very trivial matter, and perfectly painless when cocaine is employed. Should this treatment prove insufficient, then local application through the endoscopic tubes must be tried. For this purpose we use cotton wool on a tampon holder or a camel's hair brush to carry the application. The tube is inserted and withdrawn until the diseased spot is reached, and then the surface is cleaned of any discharges or oil, and the application made. The most frequently used solutions are nitrate of silver, varying from 1 per cent. to 10 per cent. ; sulphate of copper, in the same strength ; or iodine, pure, 1 gr., potass. iod., 5 grs., and glycerine, 1 drachm. The passage of a large-sized steel sound immediately before these manipulations will greatly lessen the pain of the operation. Suppositories may also be introduced through these tubes. In this region the ordinary clap syringe can be employed to great advantage, great carefulness being exercised in its use. The syringe itself is an important article. It should be perfectly air-tight, preferably of hard rubber, blunt pointed, and capable of holding sufficient to thoroughly distend the urethra. Any of the soothing or astringent lotions can be used.

The treatment of the posterior urethra differs from that of the anterior in many points. The Otis sounds are of little use, and irrigation plays a more important part. The irrigating catheter of Ultzmann is the most convenient ; it is seven inches long, has four slits at its vesical and a rubber tube is attached to the extra-vesical end, so that the irrigating syringe may be more readily connected. A marked plate indicates the direction of the curve. With this instrument large quantities of medicated fluids are made to pass over the diseased portion and into the bladder, the point of the instrument being beyond the compressor muscle. After the irrigation the patient is made to empty the bladder thoroughly. Should there exist any bladder insufficiency, the contents should be withdrawn by a soft rubber catheter.

The following solutions can be confidently recommended : Acid car-

bolic 1-500, or potass. permanganate 1-5000 to 1 in 1000. They are best used while warm.

I have had great benefit from the use of iodoform and iodol in these cases when made into suppositories and applied with Ditell's Porte Remedie, an instrument catheter shaped, open at the vesical end, and fitted with an obturator mounted on a connecting rod. The suppositories are made with coca butter, and contain about one grain of either drug.

The instrument that has given me more satisfaction than all the others combined is Keyes's deep urethral syringe, both in its original shape, and with my modification. Keyes's instrument consists of a shaft, No. 13, about eight inches long, with syringe attached, and wide lateral wings to facilitate its use, and serve as guides to the direction of its curve. I have modified this instrument by adding a bulb to the end with lateral openings. This serves two purposes. It separates all folds of the mucous membrane, applies the medicine more uniformly, and allows of the use of ointments. Keyes uses this almost universally in treating these cases. His solutions consist of nitrate of silver in varying strengths, from a quarter to ten per cent. One to five drops are carefully deposited where required, and allowed to remain. The pain produced is slight, and the changes wrought almost incredible. The use of the solid stick caustic is sometimes, though rarely, called for, and can be applied through the endoscopic tube. It should never be used blindly, and never resorted to until all other measures fail.

The diet of the patient should be well regulated, and wine and malt liquors forbidden, the only wine allowable being claret. The urine should be kept bland and unirritating, and only slightly acid. Blisters and other counter-irritants to perineum are highly spoken of by Milton, and I have frequently had great benefit from their use. They cannot, however, be employed with patients who have to keep on their feet.

In conclusion, gentlemen, I must apologize if my remarks have appeared too elementary in their character. My only excuse is that I am seriously impressed by the subject and its treatment. I venture to hope that these remarks, imperfect though they are, may draw your attention to some points in diagnosis or treatment that have been overlooked, and thus be an aid in managing this most obstinate disease.

Selected Articles.

NON-OPERATIVE TREATMENT OF PERITONITIS.*

BY FREDERICK TREVES, F.R.C.S.,

Surgeon to and Lecturer on Surgery at the London Hospital; Examiner in Surgery, University of Cambridge.

(Concluded from April issue).

THESE are represented by incision and drainage, with or without irrigation. This treatment must be considered, as it applies to peritonitis, under two entirely different aspects. In one series of cases there is vigorous, well-defined inflammation, the local symptoms are marked, pus is produced and may be considerable in amount, and the exudation is more or less clearly localized. Examples under this heading are afforded by peritonitis started by mischief in the vermiform appendix, by many forms of peritonitis within the pelvis and in the subphrenic region, and by certain cases of limited inflammation following upon injury or perforation. In the other series of cases the peritonitis is diffused, the constitutional symptoms are more prominent than the local ones, the changes in the serous membrane—so far as evidence of inflammation is concerned—are comparatively slight, and are out of proportion to the general disturbance. This form is illustrated by cases in which there is a general septic intoxication starting from the peritoneum, by peritonitis due to perforation, or following after strangulated hernia or enteritis, by puerperal peritonitis, and by examples of genuine peritonitis following operations upon the abdomen. In the first series of cases surgical interference by incision and drainage ranks with the procedure of evacuating a large abscess. In the second series the cut into the abdomen and the subsequent flushing out or drainage are to be compared with the washing out of the stomach after an active poison has been swallowed. In the one case the body has to be rid of the products of a robust and possibly limited inflammation; in the other case an attempt has to be made to remove from a cavity a poison which has already wrought no little harm. The operation, in the latter

*Abstract from Lettsomian Lectures on Peritonitis, delivered before the Medical Society of London, January, 1894.

instance, is directed not so much against an inflammatory outbreak as against a progressive poisoning.

The operative treatment of suppurative peritonitis, especially when the effusion is localized, has been remarkably successful. Records of the operation extend back into the eighteenth century, and all that modern surgery can lay claim to is the application of the treatment with greater boldness, with greater frequency, and with infinitely less delay.

The operative treatment of general diffused non-tuberculous peritonitis has, so far, no record to boast of, and little progress to chronicle. I am doubtful if a single human life has been saved by surgical interference in a genuine case of peritoneal toxemia. Surgical treatment has been most discouraging in acute peritonitis following upon gangrenous hernia, upon operation, and upon puerperal infection. It has met with but little better results in cases of perforation, in which the serous inflammation has been well established. The somewhat imposing lists of cases of success after laparotomy for acute suppurative peritonitis afford sorry matter for congratulation when submitted to a careful scrutiny. The following may be cited as illustrative of this:

Krecke gives a list of 119 cases of generalized purulent peritonitis treated by operation, and attended with only 68 deaths. In 18 instances the cause of the peritonitis was unknown, and in 36 cases it was due to trouble in the appendix, and it is among these 54 examples that the greater number of the successes are to be found. All the cases of peritonitis associated with hernia or with perforation of the stomach died.

Steinthal gives a list of 20 cases of perforative peritonitis treated by operation. There were 10 recoveries, but in no fewer than 7 of these cases the pus was encapsuled, and was apparently dependent upon perityphlitis; at least it is stated that in 11 cases out of the 20 the perforation was in the appendix. Some of the cases are remarkable enough, but they are not examples of that form of generalized peritonitis which is usually associated with perforation.

Kaiser has collected 30 cases of operation in perforative peritonitis, with 11 recoveries. In 5 of the examples of cure the locality of the perforation was unknown.

Korti, after pointing out the fallacy of statistics, and the fact that the successful cases are probably all reported, while the failures are commonly left in obscurity, gives a list of 40 consecutive cases operated upon by Mikulicz, Kronlein, and himself, for purulent peritonitis. Out of this number there are 11 recoveries, and these include no fewer than 7 cases of perityphlitis.

Kriege gives a case of perforation of the stomach, which was treated successfully by an operation carried out twenty-four hours after the viscus

was supposed to have given away, but in this instance there was no peritonitis. He incidentally alludes to six other recorded cases, all of which ended in death.

Some very excellent results have attended early operation for injury of the bowel and other abdominal viscera, but these results cannot justly be considered in connection with laparotomy for fully established peritonitis.

As to the actual mode of operating adapted for the different varieties of peritonitis, I would venture to draw attention to the following points. In all cases it is to be assumed that the skin over the operation area is cleansed and prepared in a suitable way, and that the surgeon adopts those measures which students, in their examination papers, are so fond of describing as "strict antiseptic precautions."

In cases of localized purulent peritonitis, an incision should be made into the collection by the most direct route. When the pus has escaped, a rubber drainage tube of suitable size, and with stiff fenestrated walls, should be passed to the bottom of the cavity. A dressing of some absorbent material, such as Tillmann's paper, sal alembroth, or cyanide gauze, is then applied. I have seen no advantage attend either the fuller evacuation of the pus by squeezing, or the immediate irrigation of the cavity, and I am confident that distinct harm may be done by scraping the wall of the enclosure, by persistent searching for a diseased appendix or other cause of the trouble, and by stuffing the exposed space with a considerable quantity of gauze. At the end of twenty-four or thirty-six hours the irrigation of the cavity may be commenced and continued twice daily, and now and then a little iodoform emulsion may be introduced.

In some examples of perityphlitis a well encapsuled collection of pus is not exposed, but the knife enters into an ill-defined district containing a variable quantity of thin, greenish, and often offensive matter, which appears to saturate the tissues. In such circumstances I have been in the habit of using a drain composed of strips of iodoform gauze, which are carefully introduced into the lowest accessible recesses of the region.

In cases of generalized peritonitis, the procedure adopted must obviously depend upon the cause and degree of the trouble. If the exudation be serous, it will suffice if the fluid be evacuated, if the peritoneal cavity be gently dried in its most dependent parts by means of gauze sponges, and if the abdomen be closed without drainage.

When the exudation is sero-purulent or purulent, it is, in many cases, desirable that the cavity be irrigated. The fluid which appears to be best suited for this purpose is a sterile 0.6 per cent. salt solution made warm. The details of irrigation will be discussed later on. After the washing, the depths of the peritoneal cavity are dried, so far as is possible, with sponges; iodoform powder is (except in children) dusted over the portion of the

serous membrane most involved, a long rubber fenestrated drainage tube may then be introduced, and the abdominal wound closed. Any treatment directed against the cause of the peritonitis will be independent of these measures. In the treatment of the ascitic forms of tuberculous peritonitis, the best results have followed simple incision without either irrigation or drainage. The use of the rubber drainage tube is apt to be followed by an obstinate sinus.

There are cases in which the peritonitis is more plastic in character. The intestines are found to be matted together with grayish lymph, which may be present in considerable quantity. The breaking down of these adhesions causes no little amount of bleeding, and such a step is evidently destructive of a certain desirable process of repair. Still, in order to search for the cause of the peritonitis, assuming such search to be indicated, and to set free an amount of exudation which is imprisoned between the attached coils, this freeing of adhesions must be at a certain, very limited, extent carried out. There will probably be a sero-purulent exudation in the belly cavity, and the gentlest movements of the fingers among the recently attached intestines will set free more fluid, which will be probably less opaque. A clump of adherent intestines will often cover and protect a perforation, and the ubiquitous lymph will many times close such an opening with more speed and security than are provided by any system of suturing. As the surgeon, therefore, reaches what appears to be the starting point of the peritonitis, he must proceed with the utmost caution, and be not only prepared, but rather inclined to leave the actual *fons et origo mali* undemonstrated. The main purpose of the operation is to allow a noxious exudation to escape, and, if possible, to free the peritoneum of the cause of its trouble. In the class of cases now under discussion, a perforation will be very often the starting point of the peritonitis; the lapse of time and the plastic character of the inflammation afford evidence that the perforation is, for the time being, closed. If the operator can rid the serous cavity of the effects of the perforation, he may very often leave the breach itself to be dealt with by natural means.

The wisdom of doing no more than is necessary, or as little as is obvious, is well illustrated by these cases. It is a very striking fact that some of the best results in the treatment of perforative peritonitis have been obtained in instances in which the exact site of the perforation was never ascertained. In Kaiser's statistics, already alluded to, there were 6 such examples, and of these 5 recovered. In this form of peritonitis a liberal dusting of the serous membrane with iodoform should be carried out (except in cases in children). Drainage is seldom required, and, when employed, is best provided for by strips of iodoform gauze passed among the intestinal coils to the necessary depth. Irrigation is certainly not

suited to this class of case. Gauze mops, or sponges in holders, form the best means of clearing the peritoneum under the circumstances named.

It only remains to consider what means may be taken during the performance of an abdominal section to prevent the onset of peritonitis, and to discuss the two vexed questions of irrigation and drainage. "The Modern Laparotomy," as Doderlein presumes to call it in a recent elaborate paper, is a procedure which has evidently not yet reached the stage of recognized formulæ, nor attained to the position of a stereotyped process.

A perusal of the numerous writings upon the *technique* of the operation leaves an impression that the opening of the abdomen is still regarded with an almost superstitious awe, and is still approached by many with a fussy and meaningless ceremonial, that elaboration of detail may be carried to a degree which is merely fatuous, but that, although surgeons differ greatly in their methods, they differ but little in their results.

An infinitely elaborate *technique* is no substitute for lack of skill in operating, and the power of the human body to resist the effects of injury is not capable of unlimited extension by artificial means.

It is needful, in the first place, that the operation room should be surgically clean, that the patient should be clean, and that the operator should be clean. The attaining of this end appears to be as satisfactorily accomplished by the charwoman, the laundress, and the nail-brush, as by complex chemical processes. There seems to be no imperative need that the operation chamber should be capable of being washed out in the same manner as the interior of a cup, nor do results show that it should be so constructed as to be convertible into a vacuum, or so ventilated as to admit only a stream of sterilized air. The skin over the abdomen can be prepared by a liberal scrubbing with soap and water, followed by washing with ether, and the final application of a carbolic compress, which is applied some hours before the time fixed for the laparotomy.

Ligatures and catgut are, I think, best kept in an ethereal solution of corrosive sublimate. They can be dipped into sterilized water just before they are used.

The methods of rendering instruments surgically clean are legion. I adopt the practice of placing them in a 1 in 20 carbolic solution for fifteen minutes previous to the operation. Just before they are used, the solution is diluted with sterilized water until it represents 1 in 80 or 1 in 100 in strength. To take an instrument direct from a strong carbolic solution and use it within the abdomen is to bring a caustic and damaging irritant into contact with the peritoneum, inasmuch as some of the solution must drop from the knife or forceps so employed.

Gauze sponges do fairly well for the peritoneum if properly prepared. They are best left to soak for some time in a 1 in 20 carbolic solution,

which is very freely diluted with boiled water just before the sponges are passed through the roller. Ordinary sponges in holders are better adapted for the depths of the cavity. As they are not readily cleaned after use, they are burnt as soon as they have been once employed. This disposes of many uncertainties.

It is obvious that the less the peritoneum is touched, stretched, rubbed, and handled the better. Now and then it may be desirable to repair, with a continuous suture, any rent made in its surface.

I have tried every method of closing an abdominal wound of which I have had any knowledge. I believe the best plan is to steady and straighten the wound edges with blunt hooks while the needle is being passed, to sew up the peritoneum with a continuous suture of fine silk, and to close the rest of the parietal wound with a single row of silkworm gut sutures which embrace all the soft parts, excepting the serous membrane, and which are passed by means of straight needles.

Any damaged surface of peritoneum should be well dusted with iodoform, and into the ragged cavity left after the removal of an adherent kidney or a sessile tumor a liberal quantity of the same powder may be introduced. I have reported certain cases which encourage the impression that some security against peritonitis is to be obtained by the free use of iodoform within the abdominal cavity. Iodoform should, however, not be used in the case of children, as it is very apt, in them, to produce symptoms of poisoning.

It is needless to say that the peritoneal sac should be left as dry and as clean as possible; that all bleeding should be carefully arrested, and all clots, pus, cyst fluid, and the like, should be thoroughly removed. It is possible, however, that these ends may be attained at too great a cost, and that the "toilet of the peritoneum" may become a very uncouth and barbaric process. Within certain limits, I believe it is often less injurious to leave some blood clot in the abdominal cavity than to persist in an obstinate determination to remove it at any sacrifice.

An ounce or so of cyst fluid in the peritoneal sac would, I think, do less harm than an attempt to complete the toilet of the peritoneum as carried out by a mechanically conscientious man. This toilet is often a Brobdingnagian affair, and, when strong antiseptics and countless sponges are employed, it degenerates into mere violence, and is rather of the nature of an assault. If the infinitely tender character of the peritoneum be held in mind, this toilet—as sometimes practised—is comparable to the removal of a foreign body from the eye by means of a scrubbing brush and plenty of washing soda.

IRRIGATION.

Mere blood is better removed from the peritoneal cavity by sponging than by irrigation. If the operation area be well circumscribed by

sponges, if the shoulders be raised so that blood will reach the more dependent tracts, and if a sponge be introduced into the pelvis at an early stage of the procedure, there is little trouble with blood clot. Coagulated blood is certainly very much more easily and certainly removed by means of gauze sponges than by a stream of water. The same observations apply to what may be termed healthy cyst contents, to fluid from hydatids, to bile, and to matter escaping from the stomach or intestine. With careful plugging and a watchful use of sponges a widespread extravasation is uncommon. If it does take place, the gauze can usually reach it. Irrigation would possibly have the effect of spreading the noxious fluid—as, for example, intestinal matters—over a still wider area. It may be said, therefore, that, if certain precautions be taken, the cleansing of the peritoneal sac may be best and most safely accomplished by dry sponging.

If there be a considerable outpouring of such a material as putrid pus, or if there be a copious escape of gut contents, as from the giving way of a distended bowel above a point of obstruction, then it may be better that the whole peritoneal cavity be irrigated. In such a case the amount of the extravasated fluid and its wide distribution would render its complete removal by sponging difficult.

This irrigation is best conducted by the following means: The fluid used is a sterile 0.6 per cent. salt solution at blood heat. It is introduced at low pressure, but in a wide stream. The irrigating tube is of soft rubber, and may have a diameter of three-quarters of an inch. The tube itself is introduced into the belly cavity. The flow through it can be regulated by a clip. Any form of rigid nozzle is to be most strongly condemned. The solution should flow gently into the abdomen. The peritoneal cavity is to be flooded, and not to be scoured out with a violent stream of water, which hisses and rushes from a vulcanite nozzle as from a miniature firehose. When the belly cavity is quite full of fluid, the surgeon's hand, which is already in position, is moved to and fro among the intestines with great gentleness. The coils of bowel are thus rinsed. By a movement of the hand, and by pressure here and there, the fluid overflows from the wound and is replaced by the steady stream. As the water which escapes becomes clear, the upper end of the operation table is raised so that the shoulders are much elevated, and then little has to be done but to wash out the most dependent parts, including, especially, the pelvis, and to allow the upper parts to drain. Finally, what fluid remains in the pelvis is removed with sponges, and a sponge in a holder is retained in the bottom of the pelvis during the introduction of the stitches, and only withdrawn at the last moment.

In the actual process of irrigation it is important that the temperature of the fluid be constant, that the abdomen be never over-distended, and

that the stream be not directed against the diaphragm. If these precautions be neglected, alarming dyspnea and even asphyxia may take place. If the shoulders be well raised, as already advised, these respiratory complications are less likely to occur. Polaillon has observed three cases of cessation of respiration in the human subject during irrigation.

Many surgeons have written of late on the subject of irrigation, and the general bias of these communications is very strongly against irrigation. Fluids of all kinds have been used, such as solutions of carbolic acid, of corrosive sublimate, of boric acid, and of salicylic acid. The two last named are the most in favor. Many operators employ boiled water, and not a few a weak preparation of alcohol. It is evident that whatever fluid is employed, it cannot be used as a germicide, and that all that can be aimed at is a solution which is sterile and non-irritating.

It has been urged that irrigation serves to spread the infective material, which it is required to remove, over a wider area, and that it seriously diminishes the resisting power of the peritoneum. Reichel strongly insists upon the latter objection. He found that in artificially produced peritonitis in dogs he was never able to ward off death in any case in which it was to be assumed that the animal, if left alone, would die. He introduced fecal matter into a dog's peritoneum, and, having closed the wound, he reopened it after a while and employed irrigation in some cases and sponging in others. He found neither method entirely successful in cleansing the serous cavity, but was convinced that sponging was the more efficient of the two. Even when from ten to fifteen litres of fluid was used, a quantity of infective matter was still found to have been left behind. He irrigated the healthy peritoneum in certain animals with boiled water. All the animals so treated recovered, but some were ill for a long time, and some had urgent dyspnea. These simple irrigations produced a blood-stained exudation in the peritoneal sac, and many minute hemorrhages into the intestinal portion of the membrane.

Lauenstein, on the other hand, considers that irrigation is theoretically better than sponging, although he acknowledges that in practice he has not found the procedure attended with good results. He thinks that as much damage may be done to the peritoneum by determined sponging as by the irrigator, and in this he is no doubt right.

Into the peritoneal cavity of three corpses Polchen introduced some fecal matter fifteen minutes after death. He employed immediate irrigation, and found that the material adherent to the bowel after the operation was sterile. When flushing is employed, so much fluid remains behind that some sponging becomes necessary. Other things being equal, irrigation involves more time than the mopping out of the serous sac. Stuehlen is among the comparatively few recent writers who consider that irrigation can efficiently cleanse the peritoneum.

Kinscherf has carried out a series of experiments which add an additional feature to this subject. He points out that a considerable quantity of fluid may be absorbed by the blood during irrigation, and that the amount may be such that the absorptive power of the peritoneum may be reduced to *nil*. He repeated Delpet's experiments, and irrigated the abdominal cavity of an animal for ten to twenty minutes with a six per cent. solution. He then introduced more sulphate of strychnine than was sufficient to produce tetanus in a control animal of the same weight. No effect followed. Kinscherf used a 1 in 2,000 corrosive sublimate solution after the flushing process, and found that no symptoms of poisoning followed, although toxic phenomena were always produced when irrigation had not been previously carried out.

It is, of course, a matter of question how far experiments such as these can be used as arguments *ad hominem*, but of the unsatisfactory results which have followed upon the indiscriminate use of irrigation after operations in man there can be no doubt. In not a few instances it would certainly appear that irrigation has hastened death.

DRAINAGE.

It will be allowed by most that drainage is necessary, when either an actually noxious material is left in the peritoneal cavity, or when it is assumed that an extensive effusion will follow upon the laparotomy. Considerable differences of opinion must exist as to what constitutes, either in substance or in amount, a noxious material, and also to what extent a possible effusion is to be met by drainage. There seems little to commend the employment of a glass drainage tube passed into the fundus of Douglas' pouch. I have ceased to use this appliance, and it would not appear that it is used with any frequency by the majority of those who are much concerned in abdominal operations.

A stout rubber drainage tube of large size and well fenestrated, passed into the midst of the area which is the most disturbed, appears in most cases to answer all reasonable purposes. It is not suited to tuberculous cases, and has in many instances been followed by an obstinate sinus. In any case, the sooner the tube can be removed the better. It must be assumed that the surgeon has no objection, after the operation, to frequent, and, perhaps, extensive, changes in the patient's position, for the purpose of assisting the process of drainage. I have myself seen no harm arise from a liberal fulfilment of this object. In certain instances, some of which I have already indicated, a gauze drain appears to be better adapted for the case than a rubber one. This drain is simply composed of a long strand of iodoform gauze about an inch and a half wide and some five to six layers thick. It appears to have been first advocated by Bardenheuer. In a case of purulent peritonitis, Jalaquier has passed

these strands of gauze in all directions among the intestinal coils from the diaphragm to the pelvis, with good result. A like proceeding in like cases is advocated by Steinthal. The great objections to the iodoform drains are these: They may induce symptoms of poisoning if very extensively employed; they are most difficult to remove unless there be a free discharge, and their use is apt to be followed by ventral hernia. Iodoform tampons used to close a breach in the peritoneum which cannot be closed by sutures involve much distress in their removal, and, if left in for a few days, may become quite covered in with lymph. If retained long enough to ensure a complete occlusion of the peritoneal cavity, their removal is not so difficult, but a hernia is almost inevitable. The so-called Mikulicz drain is an open bag of iodoform gauze, which is stuffed with strips of the same material. It is used when an actual cavity has to be drained, and the size of the tampon is often alarming. The bag is slowly evacuated, piece by piece, after the first forty-eight hours, and by the fifth or sixth day it is empty, and the gauze sheet itself is then removed. The cases must be few which call for the employment of this formidable tampon.

Some surgeons, either to supplement or to replace drainage, allow the wound to gape, or support it merely by a few quite loose sutures. This measure has been especially advocated in the treatment of perforative or purulent peritonitis.

In conclusion, it only remains to be said that the surgical treatment of peritonitis has not yet reached a position which is either satisfactory or secure. There has been lack of boldness in the measures used, and little sense of discouragement at the results obtained. Surgical enterprise has been directed against effects and against damage done rather than against causes and the beginnings of evil. The surgeon holds the same position in regard to peritonitis which was held some thirty years ago in regard to wounds and more accessible forms of inflammation. At that time he dealt only with the consequences of pathological wrongdoing, just as now he concerns himself with the prevention of troubles which he has learnt to control. Peritonitis will be more successfully treated when measures can be directed against the sowing of the wind rather than, as now, against the curbing of the whirlwind.—*British Medical Journal*.

Clinical Notes.

CASES IN PRACTICE.

By B. E. McKENZIE, B.A., M.D.

CASE 3. Lateral curvature of the spine. (Fig. 3.) M.P., female, æt. 22, student. For several years there had been an increasingly awkward carriage, both when standing and walking. The right hip had



been observed to project in a very marked degree, pain in the spine had been much complained of, and some weakness and pain in the left leg. Plaster jackets had been worn for several months, on the supposition that there was caries of the lumbar vertebræ; and she had been confined to bed with extension as treatment for hip disease.

Examination revealed a very marked but very pliable curve, as seen in Fig. 3 A, but no evidence of Pott's disease or of any affection of hip joint. Measurement from anterior superior spines of ilia showed no difference in length of lower limbs ; but measuring from the crests of ilia, the left was found one inch lower than the right. This obliquity of the pelvis was accompanied by a corresponding obliquity of the base of sacrum, and an unusual form of curve, resulting from allowing the whole body to settle down toward the lower side.

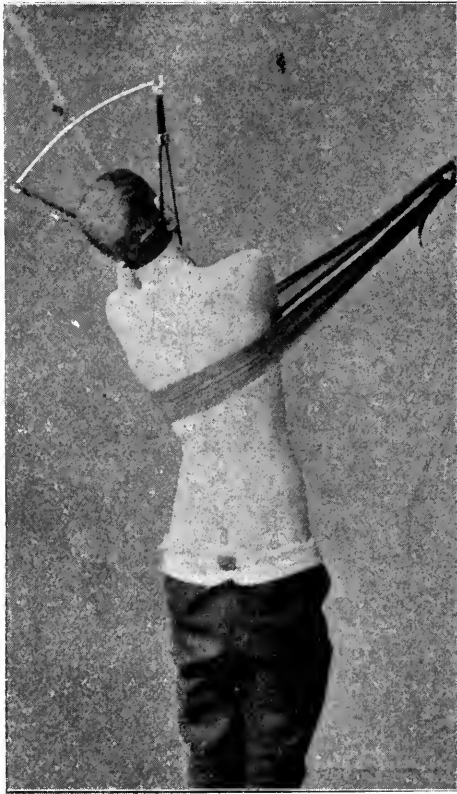


FIG. 4.

Treatment in this case consisted in having one inch of cork worn under left shoe, and exercises given daily for several months in a class with others similarly affected, having for their object the rectification of habits that tended toward asymmetry, whether in standing, sitting, or in movement.

In the latter part of this treatment it is necessary to have the hearty

co-operation of the patient, if success is to attend one's efforts. By working such cases together in a small class, one is made to stimulate another, and thus the individual patients are a mutual help.

Fig. 4 shows an additional method of dealing with these cases when the curve is not pliable, but very stiff. In this case, the patient suspends himself by pulling with his hands a rope passing over a pulley attached to a beam above, and having its other end connected with straps passing under the chin and occiput. At the same time the surgeon makes lateral traction by passing a girth around the body, having attached to it a rope passing over another pulley, making traction so as to cause pressure in



FIG. 5.

the line of an oblique diameter of the chest, the greatest force being employed so as to lessen both the lateral curve and the rotation of the vertebræ.

This latter method is employed only in cases where the curvature cannot be much lessened by the voluntary effort of the patient when duly instructed. There are a great many cases, especially in young girls, who can, when properly instructed and practised, make the spine almost or entirely straight by their own efforts. These are the cases which give the most satisfactory results through physical training.

CASE 4. Necrosis of shaft of tibia and ankylosis of knee in angular position.

W. B., æt. 15, good family history, thin and pale. Walks with

crutches, right leg flexed and retained at an angle of 135° . From knee to ankle along the anterior and inner surface there are about twenty sinuses leading to rough bone; the leg and foot are much enlarged and discolored, portions being quite livid. The leg cannot be extended beyond 135° , but there is no evidence of disease at either ankle or knee joint. (Fig. 5.)

Had ivy-poisoning five years ago, and pus having formed an incision was made. Leg grew worse, but no further operation was performed.

Feb. 17th, 1893. Operation: An incision was made from epiphysis to epiphysis along the anterior and inner aspect of the tibia, extending through the periosteum, which was lifted up and turned aside. An opening was chiseled through the new bone which had formed, extending the whole length of the shaft, and a sequestrum eight inches in length, and still showing the cylinder and medullary canal of the shaft, was removed. A large amount of débris was taken away by the curette, but it was found impossible to get a clean wound. It was carefully washed with boiled water and packed with iodoform gauze. The edges were brought together and sutured, leaving openings at the ends of the incision. His temperature, which, before operation, had reached 101° F., rose only once above 100° F. Dressing was done in six days, the packing being removed, and the wound washed with peroxide of hydrogen. Similar dressings were continued, being applied about once in three days.

Though it was thought that operation would be necessary to extend the leg, yet not wishing to operate on the knee while the septic wound of the leg was still present a MacIntyre splint was employed and force applied, by which extension was made so that the flexion at the knee was gradually lessened. When the leg became nearly straight a Thomas knee splint was employed, so that he could walk about without crutches.

Aug. 22. There are only two small sinuses, health is excellent, and he has grown stout and strong. Dismissed, still walking with the Thomas splint.

April, 1894. Photograph shows condition at this time (Fig. 6). Leg is about three-fourths inch short, foot and ankle still large, and motion at ankle rather less than half the normal. Motion at knee is normal. Wearing cork under right boot, he is very little lame.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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MITRAL STENOSIS AND PREGNANCY.

Dr. H. B. Allyn, in an article on "Mitral Stenosis and Pregnancy" in the *University Medical Magazine*, says: The most prominent and most common symptoms of mitral stenosis in pregnancy are pulmonary cough, dyspnea, and pulmonary congestion, with bronchitis. They appear usually after the fourth month of pregnancy, and increase in intensity as pregnancy advances. The symptoms may resemble those of acute pulmonary tuberculosis, especially when hemoptysis exists. A pregnant woman with mitral stenosis is never free from danger. Dilatation of the right heart is increasingly liable to occur after the fifth month of pregnancy. Sudden acute dilatation may occur at any time from a sudden strain; also acute endocarditis or pericarditis is a possibility. The earlier failing compensation manifests itself, the greater the danger. Pulmonary symptoms appearing first at the sixth or seventh month of pregnancy are of much less grave augury than the same symptoms appearing at the second or third month.

A woman with mitral stenosis which exhibits marked symptoms ought not to marry, and, if married, she should not become pregnant. Unfortunately, they both marry and become pregnant. In a few cases pregnancy may be passed with no disturbance beyond cough and breathlessness on exertion. Such patients may never apply for treatment. They require nothing but rest and protection against overstrain of the heart during pregnancy. After delivery bleeding should be encouraged, ergot never given, and the patient kept carefully in a recumbent posture for two weeks to allow any existing dilatation or tendency thereto to be overcome by hypertrophy.

In cases presenting more decided symptoms the treatment will vary somewhat, depending upon the period of pregnancy at which they appear, and their severity.

If bronchitis and a tendency to pulmonary stasis appear as early as the second or third month, the outlook is grave. The object should be to carry the patient safely until the child becomes viable, and then induce premature labor. Cardiac tonics will be required; digitalis, strophanthus, coffeine, strychnine, and alcohol are especially useful. Berry Hart regards strophanthus as much better than digitalis; it acts probably upon the right as well as the left heart. When heart tonics have to be given over a long period, I believe better results are secured if they are given for four or six weeks continuously, and then stopped for an equal period, or substituted by others. Digitalis particularly has seemed to me more effective when administered intermittently.

If the pulmonary trouble advance to the stage of edema, with orthopnea and hemoptysis, in spite of the treatment just indicated, then the patient should be purged with calomel, turpentine stupes applied to the bases of the lungs posteriorly, and dry cups over the precordia. The object of these measures is to carry off a certain amount of fluid by the intestines and kidneys, and so relieve the edematous lung, and, at the same time, to withdraw to the surface blood from the lungs and heart, and relieve their engorgement. It may be proper to add, by the way, that in such sudden conditions of the body absorption from the stomach is slow and uncertain, and often strychnine hypodermically is much more effective than when given by the mouth. If improvement follow this treatment, the question of inducing premature labor should be considered seriously. In many cases miscarriage or premature labor takes place spontaneously; most probably as a result of hemorrhage separating the placenta. This is nature's method of getting rid of the cause of the cardiac embarrassment, and is an indication, it seems to me, that labor should be induced when dangerous pulmonary symptoms persist in spite of suitable treatment.

Before labor is induced, or when at any time the pulmonary and right heart engorgement becomes still worse, particularly when there are constant orthopnea, cyanosis, edema of the feet and legs, an irregular pulse, and weak second pulmonary heart sound, blood-letting should be practised. This may be done best by venesection, sufficient blood being withdrawn from the arm to relieve the laboring heart. Relief will be manifest by lessening of oppression, disappearance of cyanosis, and the extremely anxious, weary expression of the face, and by less difficulty in breathing. Lessening of pulmonary edema will be shown by increase of fremitus and of respiratory murmur, lessening of dullness on percussion, and by the râles of edema becoming fewer and drier. If the patient objects to vene-

section, leeches may be applied over the liver or in the epigastrium. Sometimes a copious hæmoptysis or epistaxis may obviate temporarily the necessity for further blood-letting.

My attention was first directed to the value of blood-letting in cardiac disease by a case that happened when I was resident physician at Girard College. A boy suffering with mitral regurgitation and dilated heart, with general anasarca and cyanosis, was daily expected to die. His case was looked upon as hopeless. Copious and repeated epistaxis occurred spontaneously, however, and from that time the boy began to recover. The heart hypertrophied, and with a big ox-heart he was dismissed to his section. I have seen him run and jump as though he had no heart disease.

There is no doubt as to the great value of blood-letting in suitable cases. It relieves the engorged right heart, and by lessening the volume of blood upon which it must contract permits of compensatory hypertrophy. The value of loss of blood is shown practically by the statistics already quoted—hemorrhage in some form occurring in eighteen of the thirty-seven favorable cases, and in only eight of the fatal cases.

I have suggested blood-letting before inducing labor because it is immediately after labor that the dilated, overstrained right ventricle and auricle are liable to be paralyzed by the reflux of blood squeezed from the uterine sinuses. It seems wise, therefore, to relieve them beforehand, and to place them in a better condition to withstand the inevitable strain. There is the added reason for venesection before labor that after labor in these cases hemorrhage from the uterus is rarely considerable. Of course the same argument applies to labor at full time, if the symptoms are grave enough.

During labor chloroform should be administered if the pains are severe, and to prevent the severe bearing-down pains of the final stage. Delivery should be with forceps in severe cases.

After labor, the special danger that menaces the patient is sudden paralysis of the heart from overdistension of the dilated and weakened right auricle and ventricle. This condition has been insisted upon especially by Dr. D. Berry Hart. Moreover, the patient, even though she pass through labor safely, is liable afterwards to sudden pulmonary edema. The treatment for this is the same as that already pointed out. It should be anticipated, if possible, and every precaution taken to prevent any sudden strain upon the heart, such as sitting up in bed, or any unnecessary motion. No ergot, quinine, or any other remedy calculated to lessen post-partum bleeding should be administered. On the contrary, bleeding should be encouraged. The patient should not be left alone a moment during the first day or two after confinement, and the physician should always be within call. Sudden severe edema should be met with appro-

priate treatment, and especially venesection. Danger continues for at least three weeks after delivery. The patient during all this time should be guarded against any strain or sudden shock, should remain in bed, and in a recumbent posture, if breathing is possible in that position.

THE PHYSICAL DIAGNOSIS OF GALLSTONE COLIC.

Gerhardt (*Deutsche medicinische Wochenschrift*, 1893, No. 46) gives the physical signs of this trouble as follows: In the beginning, even before there is any pain, there is a palpable tumor in the region of the gall bladder which disappears as the stone passes into the intestine; the walls of the gall bladder fall quickly together, and a slight rubbing together of its walls can be felt; the attack ends with this sign, though the pain does not always end; sometimes a diastolic, rubbing sound is heard in the region of the gall bladder, which disappears with the ending of the attack. After a prolonged attack a friction remains in the region of the gall bladder which can be felt, but can be better heard with a stethoscope. During the course of a severe attack the liver increases in size, and can be felt below the margin of the ribs. One can exclude gallstones when no stone is found in the feces, when there is no friction in the region of the gall bladder, and, finally, when the gall bladder itself is not increased in size.

PREVENTION OF TUBERCULOSIS.

Vickery (*Boston Medical and Surgical Journal*, January 4, 1894), in a paper on the above subject, first calls attention to the mortality of phthisis, which remains practically the same as it was years ago. He thinks that our enthusiasm over the discovery of the *cause* of tuberculosis has caused us to lose sight of the hereditary and acquired predisposition to the disease. "Even weeds must have soil to grow in." Granting, however, the importance of climate and heredity, possibly no one doubts that the *complete destruction* of the bacillus tuberculosis would eradicate the disease. Raw milk from tuberculous cows may occasionally cause the disease, though the flesh of such animals, if inspected, is harmless. The main source of danger lies in the sputa and the pus of tuberculous sores. These may become dry and spread through the air.

Behrens sums up the necessary means for its prevention as follows: (1) The public should be enlightened; (2) sputa in public places should be minimized or rendered innocuous; (3) the streets should not be allowed to be dusty; (4) clothing and houses should be disinfected; (5) there should be public hospitals for the tuberculous; (6) tuberculous patients should not follow avocations that may endanger others; (7) tuberculosis

in cattle should be under control of the government. A corollary to these rules is the report to the Board of Health of cases of tuberculosis.

Bowditch (*Ibid.*) believes that environment is a great factor in the causation of tuberculosis. He believes that tenements should not be tolerated in cities. Children should be taught in school of the danger of spitting in houses and in the street. He believes we must be cautious about declaring tuberculosis to be as contagious as smallpox and scarlet fever. It is an infectious disease, but not to the same degree as the others, and the conditions are very different. It would have a depressing effect on patients with incipient phthisis to be treated as though they had a highly contagious disease. He always directs his patients not to use handkerchiefs, but to use cloths or paper cups which can be immediately burned. White (*Ibid.*) believes that tuberculosis of the integument can very readily cause tuberculosis of internal organs either in the patient or his friends. He believes tuberculosis should be put in the same category as leprosy. If the same methods were applied, it would soon be eradicated. Olis (*Ibid.*) believes that, considering the varied means of contagion, it is wonderful any of us escape. He believes one of the great needs is hospitals under state or national care where consumptives can be treated. Greenleaf (*Ibid.*) uses lintine cut in squares for the reception of the sputa. This is rolled in wads and placed in a paper bag, the whole being burned upon the first opportunity. He suggests that these napkins be used by all patients who are compelled to expectorate much. Bowditch (*Ibid.*) wished to impress his views as to the reporting of cases to the boards of health. "With caution and with rational methods, I believe an immense deal of good can be done, but we should keep within bounds." He believes it nonsense to class tuberculosis with scarlet fever and smallpox.

DIAGNOSIS OF TYPHOID FEVER.

Dr. Abraztsov, of Kiew, at the meeting of the Fifth Congress of Russian Physicians called attention to the value of palpitation of the ileum and mesenteric ganglia in the diagnosis and prognosis of typhoid fever (*Universal Medical Journal*). For the past four years he had observed, in examining the right iliac fossa in cases of typhoid fever, that in sixty per cent. of the cases an intestinal loop could be felt beyond the cecum, about the size of the index finger, of varying consistence, and at the level of which pain and gurgling were localized. This loop, situated at the base of the right iliac fossa, is from six to eight centimetres in length directly obliquely from above below, from within outward, its upper end being in relation with the internal part of the exterior surface of the cecum, its lower end near the outer edge of the right abdominal muscle. A hori-

zontal line from one antero-superior iliac spine will divide this loop in two equal parts seven centimetres from the right iliac spine. Autopsy verified the author's belief that this loop was none other than the terminal point of the ileum where it joined the cecum; and clinical observation has shown that the larger and more painful this loop, the graver the prognosis of the case. The author has also observed, at the base of the abdominal cavity in the region bounded by the external edge of the right muscle on the inside and the internal edge of the ascending colon on the outside, several mesenteric ganglia of the size of a plumb or nut. These also indicate a grave prognosis. After examining several hundred patients, Abraztsov feels warranted in declaring these two signs to be of the greatest value in the diagnosis and prognosis of the disease, although their absence does not exclude typhoid fever. They are also of value in the differential diagnosis between typhoid fever and the typhoid forms of acute tuberculosis. In palpating the ileum, the right hand is held perpendicularly to Poupart's ligament, seven centimetres from the antero-superior spine of the ileum, at the point where the intestinal loop meets this line. The palpation should be made with delicacy, in order to avoid contraction of the muscles of the abdominal wall. To find the mesenteric ganglia, the fingers of the right hand are placed near the external border of the right abdominal muscle parallel with the umbilicus, carefully palpating the left half of the lumbar vertebral region, below and outside the right abdominal muscle; the angle formed by the ileum and the colon will show the hypertrophied ganglia of the mesentery. As the palpation of these points is often rendered difficult by the sensitiveness and swollen condition of the large intestine, it will be seen that the greatest delicacy of touch is required.

TREATMENT OF BILIARY CALCULI.

In an article on the treatment of biliary calculi, Dr. Henri Mennier recommends these remedies for prevention of the formation of calculi, as well as for the treatment of complications dependent upon the presence of biliary concretions. These are: Calomel, salol, and salicylate of soda.

Calomel acts, above all, on the intestines, and it is not necessary to repeat the dose.

Salol may be administered in large doses for some days. It is indicated even when there is complete obstruction of the biliary passage.

Salicylate of soda, an antiseptic and cholagogue, ought to be prescribed in cases of complete obstruction of the canal, and in hepatic colic.

THERAPEUTICS

IN CHARGE OF

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INFANT FEEDING.

An infant should double its weight in six months, and treble it in a year, if its nutrition is in every way satisfactory. The weighing and measuring should be conducted monthly, and the practical point is this: If a child does not increase at the rate of one pound a month during the first year of life, and twelve ounces a month during the second year, its nutrition is not satisfactory. If a child does not grow nearly three-quarters of an inch every month during the first year of life, and half an inch a month during the second year of life, it is not satisfactory. The latter is, of course, not of the same importance as the former. A nurse should cease nursing if the result does not come near to this proportion with regard to increase of weight. Clearly, premature children would not be so large, though they should increase at the same ratio.—Percy Boulton in *British Medical Journal*.

THE ADVANTAGES OF PENTAL.

Phillips (*Zeutsch. fur Kinder.*), judging from an experience of 1,000 narcoses in the Kaiser Friedrich Hospital, Berlin, makes the following statements concerning the advantages of pental over chloroform:

- (1) More rapid narcosis.
- (2) Absence of or shorter period of excitement.
- (3) Quick recovery.
- (4) Absence of after effects such as are common with chloroform.
- (5) Cyanosis rarely appears, and is then due to tonic contraction of diaphragm and glottis.

EUROPHEN.

Dr. Ullman (*Internat. Klin. Rundschau*), after using euphen for over two years in the treatment of chancres, syphilitic ulceration, wounds, burns, etc., concludes that it is the best substitute for iodoform. It is without odor and toxic effects. Its usefulness probably depends upon the large percentage of iodine it contains, and its adhesive property, in consequence of which it forms a covering for the surfaces to which it is applied.

THE ACTION OF TRIONAL.

Trional, or dichthylsulphomethylethylmethane, has been used for insomnia—good results have been had in a melancholic subject, in mania, and in several cases of senile dementia; also in cerebral syphilis, on account of intense headache, where other hypnotics have been without effect.

It has no action on the heart (an advantage over chloral). It has been useful in heart symptoms in epileptics. It has not been useful in paralysis agitans. Beyond its hypnotic powers, it has had no effect on the circulation, digestive or respiratory functions. No albuminuria or blood is found in the urine.

Posology. For a first dose. Trional should be given in two-gram doses for continued use. One gram per day is sufficient.

Mode of employment. After taking a dose of trional, it should be followed by hot drinks to favor absorption.

There is no danger of poisoning, as is shown by an attempt at suicide by taking eight grams, where, after some vomiting, deep sleep followed, with perfectly normal pulse and respiration. Some retention of urine was a temporary feature, but the excretion soon became normal. In conclusion, trional is a useful hypnotic—sometimes unreliable—but innocuous.—*The Times and Register.*

BROMIDE OF POTASSIUM POISONING.

Dr. Greenless (*Quarterly Journal of Inebriety*, Vol. xvi., No. 1) has recently published several cases of poisoning from this source. The first case was an epileptic, who took 75 grains a day for three weeks, when stupor, coma, and extreme prostration and death followed. The *post mortem* showed intense congestion of the meninges. In another case, an epileptic, the same amount of bromide of potassium—75 grains a day—was given, and in ten days coma and death followed. Both the brain and meninges were congested, and the kidneys were in the advanced stage of cirrhosis. The other cases were less prominent, and clearly from bromid-

ism that was the result of long use of the drug. In some cases of inebriety larger doses of bromide produce stupor and prostration, from which recovery is slow, and followed by continued prostration. It is an error to suppose that the bromides are harmless. In certain cases they are capable of causing very serious results, and should be used only for a short time in large doses. We have yet to learn many things concerning this very commonly used drug.—*Therapeutic Gazette*.

NITRATE OF STRYCHNINE IN ALCOHOLISM.

From the results obtained in twenty-five cases we can learn that, simultaneously with the use of this remedy, the craving for alcohol in inebriates diminishes, and in a few days is completely gone, and, through the withdrawal of the poisonous beverages and the tonic effects of the strychnine, there is a more or less rapid restoration to sound physical health and of the mental powers; but, as most of those treated have relapsed within from one to eleven months, the inhibiting power of the remedy is not permanent, and, while it temporarily relieves the distressing and overwhelming craving for more stimulant, and promotes a return to normal health, in which condition the patients may continue to remain, yet they still lack the necessary will power to enable them to avoid the dangers which they know will precipitate a return to their previous enslaved and degraded condition. So that, while it is fully within the power of medical science to restore these patients to temporary health, strychnine does not—as, doubtless, no drug treatment ever will—prevent the possibility of further relapses, although we can always depend on it to arrest what would be a prolonged debauch if its aid is early resorted to. That weakened will power is a result of a prolonged use of alcohol is generally conceded, as is the fact that the tendency to alcoholism is, in a large percentage of cases, inherited, and it is often, as dipsomania, one of the manifestations of insanity; that a definite series of pathological conditions follows the continued indulgence in alcohol, differing only in degree in the case of the milder methyl to the powerful effects of amyl alcohol, the nervous system showing the earliest and most marked disturbance, although every organ and tissue in the body eventually suffers. These and many other facts have led neurologists to place alcoholism as a distinct disease among the neuroses.

Before rational and effective measures can be adopted for the proper management of inebriety, we must have correct opinions in regard to the physiological actions of alcohol and the pathology of the disease; otherwise we must trust to the empirical results of experience.

The chief action of alcohol, then, is to paralyze the vaso-motor system, dilating the arteries. Strychnine, besides exalting the excitability of the

spinal cord and probably the motor centres in the brain, stimulates the vaso-motor centres, contracting the arterioles, as well as being one of the most efficient heart tonics, through its stimulating effects on the cardiac ganglia.

While we have in strychnine a true antagonist to the action of alcohol, and one that will counteract its effects, the inebriate still requires aid which can scarcely be expected of drugs; he needs the mental and will power to overcome his acquired or inherited tendency to resort to narcotics. This must come from treatment which seeks first to restore all the abnormal conditions of the patient, whether due to alcohol or otherwise; then strict abstinence must be maintained, the patient being aided by moral suasion, the diversion of continual employment, and the education of the mental and moral faculties to a higher status; even the influence of hypnotic suggestion may be applied in suitable cases, as has been done recently with a fair measure of success; and, where these means fail, then institutions where voluntary and enforced detention can be secured, and where all the present known means can be most successfully applied, must be the only hope of restoring the unfortunate subjects of narcomania.—*Therapeutic Gazette.*

BISMUTH SUBGALLATE IN FERMENTATIVE DYSPEPSIA.

Dr. A. Flint, in the *New York Medical Journal*:

After stating that salicin has frequently proved of great benefit in functional dyspepsia with flatulence, the author reports that he lately employed bismuth subgallate, which seems to be much more efficient. He administers 5 grains (0.3 gme.) of this medicament, either before or after each meal. He first employed this remedy in a case of dyspepsia of eleven years' standing, and found its action so favorable that he began to prescribe it very largely, and, as the results were invariably satisfactory, he says that he continues to use it almost daily.

He gives a detailed account of the case above alluded to, and sums up the prompt and favorable results in other cases as follows: A case of alcoholism of twenty years' standing, with habitual dyspepsia for the last five or six years, was almost instantly relieved by bismuth subgallate; the flatulence and distress disappeared in twenty-four hours, and did not return, except in a very mild degree, when they were usually relieved by a single dose. While under other treatment for alcoholism, this condition was relieved. The patient has taken no alcohol for several weeks, and has no craving for it. A case of dyspepsia of four years' standing, with a chronic diarrhea, was entirely relieved in five days by the use of the bismuth subgallate alone. A case of dyspepsia of more than thirty years' standing was

promptly relieved by bismuth subgallate alone. In this case, every few weeks the trouble returns, and is relieved by two or three doses.

The author has been in the habit of prescribing the bismuth subgallate in capsules containing 5 grains (30 ctg.) each, but, of late, gives it in the form of tablets. In this latter form it is more convenient, and seems to act more favorably.—*Medical Review*.

THE ACID TREATMENT OF JAUNDICE.

Dr. M. Alivia, of Viterbo, at the recent meeting of the International Medical Congress at Rome, read a paper on this subject. He based his treatment principally upon the fact that there is present in jaundice a general diminution of acidity in all the fluids of the body. The contents of the stomach show generally an alkaline or neutral reaction, and contains very little, if any, hydrochloric acid. The urine is often alkaline, and contains more chlorides and aromatic products, but less urea, than normal urine. The acids of the bile are reduced, which occurrence probably depends upon stasis of bile in the liver. Under acid treatment the stomach contents and urine soon regain their normal reaction, while the chlorides and aromatic compounds are reduced, with a corresponding increase in the quantity of urea.

OBSTETRICS

IN CHARGE OF

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ON THE VALUE OF MECHANICAL DILATION OF THE OS IN OBSTETRICS.

At the Congress of the German Gynecological Society, held in May last at Breslau, Dührssen discussed the value of Maurer's method of dilation. This consists, first, in introducing into the womb a colpeurynter or hydrostatic dilator, which can be distended to the size of a fetal head, which it requires about three-quarters of a litre of water to accomplish; and, secondly, in making moderate but continuous traction upon this dilator until it is drawn into the vagina. Dührssen proposed to himself to determine whether this method is, under normal conditions, efficacious in quickly dilating the closed cervix, so as to render possible the extraction of a child at term. Also whether this method acts in a manner analogous to ordinary physiological dilation, and whether it involves danger to the mother or the child.

He experimented in twenty-two cases, and reaches the conclusion that Maurer's method affords a means of rapidly opening up a cervix which is imperfectly dilated, or even undilated, and that this does not involve any risk, and that it can be carried out to a degree sufficient to prevent the cervix opposing anything more than a very slight resistance to the extraction of a child at term. To apply the method the os must admit at least one finger, which it usually does in the case of multiparæ. But, if necessary, this amount of dilation can be secured by means of ordinary dilating sounds.

In four of Dührssen's cases, where the os admitted but one finger, sufficient dilation was obtained in a few minutes to permit version and extraction, and the patients did well. In ten cases the os admitted two or three fingers. In one of these the method did not succeed at once, and "automatic traction" was obtained by fixing on the stretch the rubber tube of the colpeurynter. There was also a similar difficulty in another case, where there was a flat, rickety pelvis. There was one maternal death,

which occurred in an eclamptic patient who had retained placenta and post-partum hemorrhage, but the fatal result did not seem to be due to the employment of this method. In the eight remaining cases automatic traction was employed until active uterine contraction was set up and the fetus expelled into the vagina, as happened in five instances, or else until the os was sufficiently dilated to permit easy extraction. Of these eight cases one was delivered by natural efforts, six by version, and one by forceps. Duhrssen thinks that after the instrument is introduced it is better to rupture the membranes, lest there should be caused a change of presentation or undue distension of the uterus. Slight tears of the cervix were noted in five cases. "When every antiseptic precaution is used, this method involves no danger to the mother." It would seem that the infant may run some risk when the placenta is situated very low down, because the distension of the lower segment of the womb may cause partial separation of the placenta, but in such a case sufficient dilation is secured for rapid extraction.

The method is indicated, says the author—

(1) When it is necessary to produce premature labor. It sometimes succeeds with remarkable rapidity, and is specially applicable to eclampsia.

(2) In heart disease, when a rapid termination of labor is necessary.

(3) In placenta previa. The membranes are first ruptured. If that is not sufficient the colpeurynter is introduced, and filled with three-quarters litre of water, and submitted to continuous traction. Sometimes the expulsion of the colpeurynter is followed immediately by the birth of the infant. If not, and hemorrhage recurs, version and extraction may be performed at once.

(4) In cases where there is premature rupture of the membranes and imperfect dilation owing to pelvic contraction or faulty position of the fetus.

(5) In cases where, when the os is still undilated, the life of the mother or child is threatened.

(6) In cases where after the rupture of the membrane there is uterine inertia. Here the introduction of the colpeurynter and automatic traction will produce vigorous uterine action.

This method has an advantage over combined version, because when the well-distended colpeurynter has passed the os, we can be sure that the cervix will oppose no serious obstacle to the extraction of the child.—*Ann. de Gynéc. et d'Obstét.*, September, 1893.—*Medical Chronicle*.

KRAUROSIS VULVÆ.

Martin, of Berlin (*Centralbl. f. Gynak.*, No. 13, 1894) adds three cases to the five described by Orthmann four years ago. In one of the three,

carcinomatous nodules were detected in the kraurotic tissue. In six out of the entire eight, the cure was effected by the operation devised by Martin himself in 1887, one healed after therapeutic measures had overcome the characteristic stenosis of the vulva, and one case refused treatment. Kraurosis seems to be a peculiar histological atrophy of the vulvar tissues, perhaps similar to the leucoplastic patches on mucous membrane described by Schwimmer. Martin does not agree with Sanger that kraurosis is a progressive presenile or senile atrophy of the vulva with pachydermia. The disease cannot be traced to any venereal or microbial influence. It may occur in young or old, virgins or multiparæ. The earliest stage of the disease at least is inflammatory. A feeling of tenseness is more frequent than itching. As fissures develop, irritation results, with consequent neurotic and other evil symptoms. The diagnosis depends less on the disappearance of the pigment in the parts than on the shrinking of the tissues, first in the posterior commissure and labia minora, and lastly in the clitoris and labia majora. An active discussion on the very uncertain dermatological nature of the disease followed the reading of Martin's communication.—*British Medical Journal*.

THE TREATMENT OF RUPTURE OF THE UTERUS.

Merz (*Archiv. fur Gynakologie*, Bd. xlv., Heft 2) describes two cases of rupture of the uterus which came under his observation, and tabulates all the hitherto published cases, giving an analytical review of them. In fifty-four cases celiotomy was performed with 48.1 per cent. recovery. He arrives at the following conclusions:

(1) If only the trunk and extremities of the fetus have escaped into the abdominal cavity, and the head lies over the pelvis, the woman should be delivered *per vias naturales*, either with the forceps or by perforation and craniottractor.

(2) If the head of the fetus or the whole body has escaped into the abdominal cavity, version and extraction, as frequently advised, should not be attempted, but celiotomy should be done at once, and the fetus delivered through the abdominal incision.

(3) In the latter case the rupture should be carefully sutured.

(4) If the woman has been delivered *per vias naturales*, and the conditions are very favorable, celiotomy and suture of the rupture should follow the birth immediately.

(5) If the conditions are not favorable, then drainage with iodoform gauze without irrigation should be employed.

(6) If the uterus is markedly degenerated, or if septic endometritis has developed, a Porro operation should be done.—*University Medical Magazine*.

TREATMENT OF VOMITING OF PREGNANCY.

Lutaud (*Revue Obstetricale et Gynécologique*, February, 1894) states that vomiting of pregnancy is best treated by cocaine. The action of this drug is often strengthened by combining it with antipyrin. Thus the following prescription:

R.—Chlorohydrate of cocaine, gr. iss. ;
Antipyrin, gr. xvi. ;
Distilled water, ℥iv.

Sig.—One teaspoonful every half-hour until vomiting ceases.

If the stomach will not tolerate this quantity of liquid, ten drops of a one and a half or two per cent. solution of cocaine are administered, repeated at one or two-hour intervals.

At times the application of cocaine to the os is extremely valuable. The following prescription may be used:

R.—Hydrochlorate of cocaine, gr. xvi. ;
Extract of belladonna, gr. iv. ;
Vaseline, ℥ss.

Cotin's method of dilating the os with the finger sometimes causes immediate cessation of vomiting. Occasional success will follow Routh's procedure, which consists in exposing the uterine neck by means of a speculum and painting with tincture of iodine. In cases of moderate severity, the following mixture will be found serviceable:

R.—Tincture of iodine, ℥ii. ;
Chloroform, ℥ii.

Sig.—Five drops night and morning at meal times, taken in Seltzer water.—*Therapeutic Gazette*.

CONCERNING THE TREATMENT OF ABORTION.

Eckstein (*Prager medicinische Wochenschrift*, Nos. 17 and 18, 1892), as assistant in Martin's clinic, has had opportunity to study sixty cases of abortion treated by Martin's principles in his private clinic in Berlin. He attaches the greatest importance in the curettage of the uterus to the thorough emptying of the tubal angles, as remains of placenta or portions of membranes are especially liable to be attached there. In nearly all the cases Eckstein followed a manual or instrumental emptying of the uterus with curettage, by the idea that an imperfect separation of the decidua and a consequent endometritis is thereby to be prevented. The results of this method were very satisfactory. From his experience he deducts the following:

(1) The instrumental method of the treatment of abortion is the only rational one.

(2) The recognition of the cause of bleeding from the uterus is of the greatest importance, and therefore in every uterine hemorrhage a careful examination should be made.

(3) Ergot and similar drugs should only be used when the uterus is empty.

(4) If abortion is in progress, tamponnade of the vagina is only indicated when there is no dilatation of the os uteri.

(5) When the dilatation of the os is sufficient, the emptying of the uterus, in spontaneous abortion, is indicated.

(6) In large embryos, from the fifth month on, one conducts the abortion as in labor at term.

(7) In abortion attended with fever and the decomposition of the product, the uterus should be emptied of its contents as quickly as possible.

(8) A thorough curettage of the endometrium should follow every emptying of the uterus in abortion.—*University Medical Magazine.*

GYNECOLOGY

IN CHARGE OF

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THE EARLY TREATMENT OF CARCINOMA UTERI.

The large number of hopeless cancer cases constantly applying to me for relief have induced me for the past three years to adopt certain stringent rules with regard to my own patients, which I have taught for the same period in my lectures at the Johns Hopkins Hospital.

The end in view is twofold—first, by treating cervixes liable to become cancerous, and thus prevent the formation of this neoplasm; and, secondly, to detect cancer of the cervix at a sufficiently early date to successfully eradicate the disease.

(1) It is the duty of the obstetrician to see each patient at his office from two to three months after her confinement, and there to examine and make a careful record of the condition of the pelvic structures, stating accurately what lesions have been produced by the confinement.

(2) Cervical lacerations should be certainly described, noting the position and depth of the tear and the appearance of the lips. Lacerations require no treatment when the lips are thin, uninfiltrated, and lie together. Thick, infiltrated, and everted lips associated with cervical catarrh call for depletory treatment followed by repair of the laceration.

(3) Every woman who has passed thirty-five years of age and has borne a child should have this examination made without delay by a competent physician, and if the cervical lips do not appear perfectly sound she should be kept under observation and examined at intervals of from six to eight months.

(4) Every woman over thirty-five, with a cervical tear, should be examined at least once a year for ten years, or longer, if the appearance of the lacerated area is not perfectly healthy.

(5) These rules apply with special force to patients whose family history shows a marked inclination to cancerous diseases.

If these rules are conscientiously observed, there is not a shadow of doubt but that thousands of lives would be saved yearly in this country alone by timely interference with a disease so markedly local and accessible in its origin.

I feel that while we are searching for a cure for cancer, the line of progress in the immediate future for the gynecologist is clearly in the direction of prophylaxis and anticipation, either preventing or discovering the malady in its earliest stages.—*New York Medical Journal*.

SURGERY

IN CHARGE OF

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GRAFTING.

In a recent clinic, McBurney, speaking of Thiersch's method of grafting, says: "One of the most interesting features of this method of grafting is that the grafts do not unite as well if taken from the body of another person. It is very difficult to account for this, but it shows how mysterious are the conditions concerned in this process of grafting. I have had this experience in a case where, on account of the delicate health of the patient, I was forced to rely upon grafts obtained from another person. I took grafts from the leg of a young girl and applied them to the back of her brother, as I did not think it advisable to subject him to the necessary traumatism. Although the sister was a stout and healthy girl, all the grafts melted away in a few weeks. The boy, however, remained in the hospital, and improved so much in health that the next time I covered the defect on his back with skin removed from his thigh, with the result that every graft united. I have heard the same statement made by other operators, and yet I have never had any explanation of this phenomenon, except the general one that our own tissues are more suitable for grafts than those of another.

"Another interesting feature is the fact—although this is not universally admitted—that the grafts behave very much better under moist treatment than under the dry. I am so much impressed with the necessity of keeping up moisture in the management of grafts that I never allow them to become dry inside of thirteen or fourteen days. Some surgeons have told me that they get good results from the dry dressing. This is not my experience, however. In order to keep up moisture, as soon as the grafts are in position they are covered with delicate rubber tissue to prevent

evaporation and desiccation. The materials lying outside are kept moist with the same saline solution we use during the operation. The rubber tissue is put on in the form of shingles, so that the fluid may enter through the interstices and keep the grafted surface moist.

"I have seen another feature in this grafting process which is very satisfactory, and that is the hemostatic power of the graft. In operating without a constricting band, after you shave off the granulations you will see a certain amount of hemorrhage. If you immediately arrest the bleeding and lay on the graft, you will note an entire cessation of hemorrhage, if the surface is absolutely smooth. It seems as though the smooth surface of the graft, when applied to the smooth surface of the wound, closes up the mouths of the vessels, and thereby produces a cessation of the hemorrhage."—*International Journal of Surgery*.

JAMAICA DOGWOOD IN THE VOMITING OF PREGNANCY, AND THAT OF FOLLOWING THE TAKING OF ETHER AND CHLOROFORM.

For some years past I have been using Jamaica dogwood (*Pyscidia erythrina*) in the vomiting of pregnancy, and with the greatest satisfaction.

In the more extreme cases in which the vomiting or retching is almost constant, independent of the taking of food, the remedy is best given as an enema in three or four ounces of boiled starch. With a view to increasing the action of the dogwood, I have been combining with it the bromide of sodium or ammonium, giving half a drachm of the ext. *pyscidiaë ery. fl.* (P., D. & Co.) and twenty grains of the bromide every three or four hours.

Where the stomach will retain the remedies a somewhat smaller dose will answer by the mouth, but usually the administration by the rectum is more satisfactory.

After the second or third day an injection in the morning, and another in the evening, not only secures relief from the nausea, but brings about a return of the appetite, so that the patient is enabled to take and retain the more digestible solid foods. Some little time ago, while preparing to operate for the fourth time upon a woman suffering from a vesico-vaginal fistula—my three former attempts to close the opening having failed through three days and three nights of almost constant vomiting and retching—I recalled my experience with dogwood in the vomiting of pregnancy, and determined to give it a trial. After the operation—commenced under chloroform, and continued under ether—the vomiting started as before, the nurse administered the dogwood mixture, and after the next hour we had no nausea; the self-retaining catheter, which, after the first two days, could not be tolerated before, gave but little discomfort, and perfect union was restored.

I have since used the dogwood in a number of cases, so far without disappointment. Several times, the mixture being withheld too long, nausea has developed, but only to give way upon the administration of another enema.

While my cases have been few in number, the effect has been so promptly satisfactory that I am led to hope that the experience of others may correspond with mine, and that in a fair proportion of cases this serious drawback to the administration of the pulmonary anesthetics, ether and chloroform, may be eliminated.

SURGICAL THOUGHTS ON APPENDICITIS.

In the May issue of the *Annals of Surgery*, Dr. J. D. Rushmore presents the results of his observations in appendicitis. He takes exception to the position sometimes taken by physicians, and says it is by many in the profession looked upon as a medical disease, unless or until it has reached an operative age, when it becomes surgical. The physician is even on record as saying to the surgeon: "When I want you I'll let you know, and I want you to come ready to operate." This puts the surgeon in a position in relation to the case that he will not shirk, indeed, but one that he does not desire. He would like to decide whether he is to operate, and when—if the responsibility of the treatment comes on him, as it must if he does the operation. I think a good deal of importance should be attached to combating this claim made by many physicians.

The surgical nature of appendicitis would seem to be proved by the suppurative process, by the ulceration and gangrene, and general septic inflammation of the peritoneum, all of which are more or less common in half the cases, and possibly in every case; and still more by the fact that the diagnosis is largely surgical—is made so largely by the hand; and, finally, by the treatment, which is in so large a percentage of cases operative. Nor does the fact that many cases have recovered without operation take the disease out of the list of surgical affections. To do our very best, it would seem reasonable that the surgeon should see the case at the earliest possible moment, and not be called upon so late that the best he can do is, after all, but the second best. If our experiences, medical and surgical, are to yield the results for which we hope, the surgeon and physician must start on the same basis, and this manifestly is not the case if the surgeon is brought into contact with his patient two or three days later than the physician. Already in consultations a comparison is being instituted between the medical and operative treatment of appendicitis on the above basis. We must decline to accept the inferences drawn from such an unfair comparison. Let us adhere to the position taken in our most modern surgical

writings, that appendicitis is a surgical disease from the beginning; our comparisons must be made on the basis of connection with the case from the start. And any one who assumes the responsibility of treatment ought to feel that he is doing surgical work just as he would in undertaking the treatment of a fracture.

A fallacy, but one that ought to be quickly dispelled after operating on a few cases of appendicitis, is expressed in speaking of the first day that the patient complains of pain as the first day of the disease. With about as much propriety might we speak of that as the first day of the disease when a typhoid ulcer perforates the intestine. Here an ulceration, always present in typhoid, but not to be located by the touch or pressure of the finger, has been steadily eating its way into the intestinal wall for two, three, or four weeks, when suddenly, and often without any symptoms to indicate its development, perforation takes place, and the patient is in collapse. The comparison, I think, is a fair one, and the local conditions often the same. What we recognize, I believe, in appendicitis is peritonitis, and not the ulceration in the mucous membrane, which has been going on for a longer or shorter time; and instead of seeing the case on its first day, we are really seeing it, in the majority of acute cases, near its last day. This thought has made me much less willing to temporize with these patients than formerly.

An ulcerative process has been the starting point in my own cases, rather than a gangrenous one. In the cases seen late a destructive inflammation has produced such ravages as to render it impossible to determine the character of the initial lesion.

Impressed with the importance of the views thus far expressed, I have felt the necessity for an early and exact diagnosis. To make an exact diagnosis late in the disease is easy, and to make an early probable diagnosis is not difficult; but to make it at the same time early and exact is, in some cases, impossible, without the aid of an exploratory incision.

The symptom on which I have relied, and the one without which I confess myself unable to make a diagnosis, is the tenderness—the “McBurney point”—never absent in my own personal experience, and never thus far making me mistaken in my diagnosis. The other symptoms have, many of them, been such as are associated with other abdominal disease; but some of great value in confirming me in the diagnosis, such as the sudden onset of the disease, the tension of the muscles, the ill-defined tumor, constipation, the facial expression, the rigid position of the body maintained in moving. The other symptoms I have learned to depend on less, but recognize their value; such symptoms as nausea and vomiting, pain, the temperature and pulse, chills and sweating, and the evidences obtained by rectal examination. The value of these symptoms,

however, has depended very much on the stage of the disease. Those cases that have been seen very early, and have been marked by the sudden onset of severe pain with even moderate fever and tenderness at the McBurney point, and usually vomiting, have proved to be cases of appendicitis, whatever else they may have simulated before the operation. Later on, the abdominal wall has been rigid, but not so under an anesthetic; the tumor present was easily felt with the patient anesthetized, the pulse becoming hard and irritable. Rectal examination I have not made of late, because it has not helped me to a diagnosis where I have made it. The temperature, as indicated by the thermometer, has been of almost no value.

As to the treatment, I may say that, in those cases that I have seen lately, when a well-marked abscess cavity has been present, I have been satisfied to evacuate the pus, wash out, and pack the cavity with iodoform gauze, without making much search for the appendix. Sometimes I have removed the sloughed appendix with forceps, and also small fecal concretions. The cases that I have been able to see or to treat very early have had a catgut or silk ligature applied without invasion of the stump, the abdominal wound stitched up, and primary union has taken place. The large proportion of cases operated upon have been seen from the third to the fifth or sixth day. This has seemed to me the most undesirable time to operate, on account of the liability to cause the very thing we operate to avoid, namely, infection of the peritoneum, and, exercising all the care possible to wall off the abscess cavity from the general abdominal cavity, the pus will often pass out of our reach before we can remove it all, and the danger of infection is increased when we remove the appendix, and in doing so break up adhesions that have kept the pus circumscribed. In this third class of cases I have used a catgut or silk ligature to the base of the appendix, and should imagine that it would be a difficult thing to invert the stump on account of the thickened condition of its walls, a condition which has not been present in the operations very early. In cases operated on during this stage I have had some difficulty, without manipulating the intestines more than seemed wise, to recognize the colon. I have depended less on the appearance to the eye than on the thickness of the walls under the finger, the additional thickness furnished by the longitudinal bands, and by the shortness of the mesentery that holds the colon back when traction was made upon it. The tags of fatty tissue have not always been recognizable to the eye or the touch. The cavities have been packed with iodoform gauze, and, when possible, left undisturbed for five days.

His conclusions are that :

- (1) Appendicitis is a surgical disease from its beginning.
- (2) Its diagnosis is usually not difficult.

- (3) In doubtful cases exploratory laparotomy is justifiable.
- (4) Appendicectomy, all things considered, offers the best chance, immediate and remote, for the patient.
- (5) The operation should be done at the earliest possible moment.

ON A CASE OF FATAL HEMATEMESIS.

I was consulted about ten years ago by a middle-aged member of our own profession on account of extensive tertiary ulceration on his foot and leg. He had suffered from syphilis twenty years previously. He was very pale, and had been liable to vomiting of blood. His liver was not much enlarged, but could be distinctly felt to be hard and nodular. He was at the time quite confined to his bed. I prescribed for him the three iodides, in a mixture, with a calomel pill; and under their influence he made the most astonishingly rapid and complete recovery. Within a few months he was again engaged in a laborious country practice. He remained under my observation at intervals of six or twelve months for the next eight years. During this time he never had any recurrence of his syphilitic ulcerations; but he suffered repeatedly from attacks of the most profuse vomiting of blood. These attacks occurred over and over again, and in more than one it was feared that he would die. His attacks of blood-vomiting would come on quite suddenly, when he was not feeling ill. He assured me that the blood would pour forth from his mouth so that a large basin would be filled in the course of a quarter of an hour. On several occasions it had been necessary to leave him on the floor for the night, for fear that any movement might be fatal. Usually, these attacks were over in the course of half an hour; but on more than one occasion they recurred during several days. As he lived in the country, I never myself saw him during an attack of bleeding. The medical men who were called in to him always diagnosed ulcer of the stomach, and there seemed no other explanation of such profuse bleeding. Against that suggestion, however, there were the facts of long-continued liability, and an entire absence of stomach symptoms. There had never been any pain in the stomach, and as soon as ever the attacks were over Dr. I—— would begin to eat meat freely and to take port-wine, in order to make up the blood he had lost.

In addition to the attacks of hematemesis, he suffered also repeatedly from ascites. His abdomen would become distended until he could only just manage to walk about. Calomel was the remedy for this state of things. The ascites and the vomiting of blood generally occurred together; and the calomel, when given in conjunction with tincture of iron, so far from increasing his anemia, seemed to help the process of

blood-making. On one occasion, after a very severe attack, I had sent him to Brighton to recruit, and there his ascites became so distressing that he wrote to ask me to come and tap him. The next day, however, he was better, and within a fortnight, his gums having in the interval been a little sore, the fluid had almost wholly disappeared.

At length the end came. He had been attending to his patients as usual, and thought himself in better health. After having complained to his wife of a sense of weight at his stomach, vomiting of blood set in, and was so profuse that death resulted. I did not hear of the event until a week afterwards, and, unfortunately, no autopsy had been performed.

I have found in an old volume of the Dublin Hospital Reports a case which seems to supply what my narrative wants—a *post-mortem* proof that this form of hemorrhage may prove fatal, although no ulcer of the stomach be present. A man of 24, a tailor, was admitted under Dr. Cheyne's care in an exsanguined condition from hematemesis. He had been ill only four days. He looked like a spirit-drinker, but he denied that such was the case, and said that a year previously he had suffered from a similar attack, and had almost died from it. In the interval and formerly he had had good health. During the three weeks that he was under Dr. Cheyne's care in the hospital ascites developed itself. Further vomitings of blood took place to the extent, on one occasion, of "four large basinfuls," and the stools also contained the remains of blood. After one of these attacks death took place. The *post mortem* revealed a bloodless condition of all viscera, and mottled kidneys; but there was no ulcer in the stomach. The left lobe of the liver was enlarged and indurated.*

During my poor friend's life we often discussed the question as to the source of the hemorrhage, and were much puzzled to give any plausible explanation. That he was the subject of cirrhotic liver was undoubted; but the attacks were more sudden, more profuse, and more easily recovered from, than any which I have ever supposed to be explained merely by hepatic impediment. Since his death it has occurred to me as not at all improbable that he was the subject of varicosities of the lower esophageal veins. For the reasons already given, it seems improbable that he had an ulcer of the stomach, yet the bleeding far more nearly resembled that of an open artery or vein than anything we can suppose possible from mere congestion. The fact that the veins of the lower part of the esophagus do become varicose, and are sometimes the source of fatal hemorrhage, has been established by clinical observations which have been placed on record. I possess a French thesis by M. Eichhorst, recently

* "A Case of Melena, with Observations, etc.," by J. Cheyne, M.D. Dublin Hospital Reports, Vol. I., 1818.

published, which gives a detailed account of their anatomy, and a summary of the cases previously recorded. The anatomical arrangement of these veins is such that they tend to dilate, as collateral channels, whenever the circulation through the portal vein or liver is obstructed.

An excellent paper on this subject was read at the Birmingham meeting of the British Medical Association in 1890, by Dr. Stacey Wilson and Dr. J. R. Radcliffe. The first case published in Britain appears to have been one by Dr. Bristowe, in the *Pathological Transactions*. In this case it was specially noted that the liver was healthy, although the patient, a woman of 48, had suffered from ascites. She had died in her first attack of hematemesis. The vein which had bled was recognized at the autopsy. In the paper to which I have referred, Dr. Radcliffe records five cases, several of which are very complete. He concludes his paper by expressing the belief that, if pathologists would look for these ulcerated esophageal varices, they would be found much more commonly than is supposed, and that the theory of "capillary oozing as a cause of hematemesis would gradually ooze away." In one of Dr. Radcliffe's cases it is stated that the blood rushed from the mouth of the patient "as from a hose-pipe." He brought up on one day eighty-four ounces, on the next forty-eight, and on the day following forty.—J. Hutchinson, in *Archives of Surgery*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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THE TREATMENT AND CARE OF CHANCRE WITH PEROXIDE OF HYDROGEN.

Dr. W. P. Worster, in the *Journal of Cutaneous and Genito-Urinary Diseases*, in writing of the treatment and care of chancre with peroxide of hydrogen, says that the treatment adopted varies so greatly that the general practitioner has no fixed rule to follow. He cites a few cases where the treatment of the peroxide was applied with the compressed air apparatus at sixty pounds pressure, and concludes as follows :

"The pressure of the spray (60 pounds), which is one of the most important factors in the whole method, not only cleanses and produces thorough asepsis of it, killing the germs of the disease at the very bottom of the ulcer, but the oxygen of the peroxide aerates the blood through the capillaries, and arrests the progress of the disease at the nearest possible point, allowing the process of repair to commence as soon as possible, according to the severity of the disease, with the least loss and destruction of tissue and consequent scar. It must be particularly understood that in using this treatment all instruments, spray tubes, and bottles must be made of either glass or hard rubber, for the reason that metals, with one or two exceptions, coming in contact with the peroxide, will destroy its component parts and render it useless; and I have found also a great difference in the results if the peroxide is fresh or otherwise. The first effect of a spray of peroxide upon the ulcer is to deposit upon it a thick film of albumen ; this should be allowed to remain for about half a minute or less ; then continue the spraying till a large tubeful has been used (one ounce) ; as the sore progresses the spraying causes a good flow of rich arterial blood upon it, which merely shows returning healthy conditions."

[I have applied peroxide and other medicaments with the spray apparatus, with exceedingly good results. I do not think that so high a pressure is necessary by any means. I find that the double bulb hand

atomizer will produce just as good results as the more expensive spray apparatus. I have always used some other application, as mercury or silver, after the use of the peroxide. Yet, after all, in cases where the sore can be excised, that is the simplest, least painful, and quickest treatment of the chancre.—E.E.K.]

TWO CASES OF UNUSUAL LOCATION OF CHRONIC BLENNORRHEA IN WOMEN.

Finger, in *Wien. Med. Wochen.*, says that these cases are the first published in which the chronic blennorrhoea was confined to the urethra, the external and internal organs being at the same time healthy. The symptoms of chronic gonorrhoea in women are objective purely, and in these instances could be seen only when the patients had not passed water for several hours. Stripping the urethra from behind forward, milky, mucous-like pus could be squeezed out, and the urine passed after thorough cleansing of the external genitals was turbid or contained gonorrheal threads.

THE VALUE OF MICROSCOPICAL EXAMINATION FOR GONOCOCCI.

Neisser recommends the examination of pus for gonococci, for the following reasons :

- (1) It is beyond doubt that gonococci are the true cause of gonorrhoea.
- (2) In many cases, especially in chronic affections, with only slight subjective and objective symptoms, the proof of the existence of gonococci leads us to a correct diagnosis, and thereby to an effective treatment (instead of using inefficacious astringents, we apply well-known anti-blennorrhagics, such as silver, mercurial salts, ichthyol, etc.).
- (3) In cases where the question arises whether gonorrheal disease is the result of infection or is the remnant of a previous outbreak, examination for gonococci is indispensable.
- (4) Since in every stage we must adjust our treatment to the number of gonococci present, the search for them is necessary not only in the beginning, but during the whole time of treatment.
- (5) In the present state of our knowledge, examination for the germs must be confined to the microscopical ; bacteriological cultivation is too troublesome.
- (6) Where we receive positive proofs of the presence of gonococci the diagnosis is made. In negative cases caution is necessary, as it is well known that the bacteria may exist in the deeper structures, lacunæ and mucous folds, in such small number that the superficial secretions under examination may be entirely free. Then it becomes imperative to excite

artificial irritation to increase the number and bring them to the surface. Clinical symptoms will aid considerably in this condition.

(7) In married persons the existence of gonorrhea in one will impose on us the duty of treating the other.—*Deutsch. Med. Wochenschrift*.

THE EFFECT OF LIMEWATER ON THE URINE.

As limewater is almost a necessary part of the liquid diet of illness and infancy, it is very important that all its effects upon the system should be known. That the urine is rendered alkaline by an excess of limewater in the food is a frequent clinical observation, but the nature of this alkalinity has only recently been studied. The mother of an infant noticed an ammoniacal odor coming from its urine moistened linen, for which the physician could find no other cause than the limewater which had been administered freely in the milk for some months. As a test case, two teaspoonfuls of a very thick cream of lime were well distributed in the milk and other food of a boy, four years old. On the evening of the third day, the child's urine gave off free ammonia, and had all the characteristic reactions of a dilute solution of calcium carbonate. There was no digestive disturbance.

The test was made by Dr. John J. Abel, of the Johns Hopkins Medical School, whose account appears in the *Johns Hopkins Hospital Bulletin* for April. He further experimented upon healthy animals, and found that when slaked lime was mixed with the food of dogs fed on bone-free meat their urine became strongly alkaline, and spontaneously gave off carbon dioxide and ammonia. It contained, however, absolutely less ammonia in the twenty-four hours than normal urine. It always contained a calcium salt in solution which was not bicarbonate of calcium, and which decomposed with precipitation of calcium carbonate when the urine was allowed to stand. This lime urine exhibited all the characteristics of a weak aqueous solution of calcium carbonate, and a white powder was isolated from it which behaved in every way like synthetically prepared calcium carbonate, except that it gave less accurate results when subjected to quantitative analysis. Human urine was found to react exactly like that of the dog, when large quantities of lime were taken in the food, and it likewise contained calcium carbonate. Carbonic acid, which is believed to be one of the principal immediate precursors of urea, combines with the lime, and the human body probably avails itself of the readily soluble carbonate of calcium to eliminate an excess of lime that has been absorbed. It is an interesting fact that so simple a drug as limewater may cause such hitherto unsuspected changes in urine.—*N. Y. Medical Journal*.

PEDIATRICS AND ORTHOPEDICS

IN CHARGE OF

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POTT'S DISEASE—PARALYSIS—OPERATIVE TREATMENT.

Nearly all cases of paralysis from Pott's disease recover through proper treatment. Myer says 55 per cent.; Gilney, 50 per cent.; Taylor and Lovett, 90 per cent.; Phelps, 90 or 95 per cent. Hence, probably, not more than ten in every hundred cases of Pott's paralysis are incurable without operation. Of those operated on statistics show a mortality of 40 per cent. Of thirty-six cases operated on by Schede, Horsley, Lane, and Macewan, there were eleven cures, eleven deaths due directly to the operation, and 40 per cent. uncured, slightly improved, or died after many months.

Paralysis is produced from pressure, (1) by bending of the spinal column from destruction of bone; (2) invasion of the canal by the tubercular process, producing a large deposit of caseous matter, and a meningitis from invasion with deposit of inflammatory material. Sudden paralysis is generally due to bone pressure, whereas slow, progressive paralysis is produced by tubercular abscesses invading the cord, or a pachymeningitis and growth of granulations with inflammatory deposit. The cases of sudden paralysis are the more likely to yield to mechanical treatment, while those which are long-continued and progressive are the most likely to prove intractable. Always treat the case mechanically for a time—say, two months—and if the paralysis continues to increase, or if it become total, operate. Cases of total paralysis with incontinence of urine or feces of several months' or weeks' duration should be operated on, unless they show speedy improvement under treatment. When there is well-defined abscess burrowing in the canal with increasing paralysis incision should be made, the abscess scraped out, and good drainage established. Operate when pressure threatens the destruction of the cord.—Phelps, in the *Journal of Nervous and Mental Diseases*, July, 1893.

PROPAGATION OF DIPHTHERITIC VIRUS.

Bellanti (*Riforma Médica*, March 23rd, 1894) relates a case, showing the long continuance of diphtheritic bacilli in the tonsils and throats of apparently healthy individuals. In the case of a child who had died from diphtheria, it was thought that infection might possibly have occurred from a brother who had had the disease seven months previously. His throat was examined, and in the tonsil exudations two varieties of bacilli were found identical with the Klebs-Leoeffler streptococci which were found in the dead child. Luxuriant and extremely virulent cultivations of diphtheritic bacillus were made by inoculation on blood serum. A second examination three months later again disclosed the presence of Leoeffler's bacillus, but evidently in a state of great attenuation, as they gave rise only to very transient local inflammation when inoculated into animals. It is suggested that great care should be exercised regarding the purification of the throat in cases convalescing from diphtheria.

TETANUS COMPLICATING VACCINIA.

In the *Medical News* for February 24th, 1894, Toms reports a case in which a little girl, aged five years, died from tetanus, resulting apparently from infection at the open sore at the site of vaccine inoculation. The child had previously been ill with measles, mumps, and strumous keratitis. Bovine virus was used, with all possible antiseptic precautions. The ulcer which formed subsequently was deep, slightly indurated, and discharged a sanious pus. Six days later the child had an aphthous stomatitis, and it was while examining the mouth that slight trismus was first noticed. Some ragged, decayed teeth were present. Two days later there was rigidity of the muscles at the back of the neck, and some pain. The following days spasm extended. The mouth could not be opened, and later there was unusual spasm with opisthotonos. In all, there were eleven convulsions. Death took place thirty-five days after vaccination. The ulcer on the arm at this time appeared to be perfectly healthy. The endeavor to secure cultivations of tetanus bacillus from the arm gave negative results. In view of the fact that there was an ulcerated mouth, it is doubtful how the tetanus infection occurred. Six cases complicating vaccination have been collected.

FREIDREICH'S ATAXY.

The report of the Manchester Medical Society proceedings (*British Medical Journal*, April 21st, 1894) contains the following notes of two cases of this disease by Dr. Dreschfeld :

CASE 1. A girl, æt. 18. No other member of the family affected; no history of alcoholism in the parents. Ten years ago she noticed that she could not walk so well; five years ago, after an acute febrile attack, she became worse, and was much affected in her walking; and three years ago, after another acute febrile attack, she got much worse, and since then had not been able to walk or stand by herself. She was of diminutive size. Slight horizontal nystagmus on fixing a certain object, when the muscles of the neck also showed slight movement, and speech affected. The upper extremities showed inco-ordination, the lower extremities marked inco-ordination. There was both static and motor ataxy; the superficial reflexes were present, the deep reflexes absent. There was no anesthesia, and no affection of the bladder and rectum. The patient complained of slight pain in the arms and legs. The toes were forcibly flexed, and there was beginning talipes.

CASE 2. A boy, æt. 16. No other member of the family affected; father was a drunkard. The symptoms date from early infancy. The patient is able to stand and walk, but his gait was markedly ataxic. Occasional slight nystagmus; no affection of speech; tremor of tongue. Upper extremities showed slight inco-ordination, lower extremities marked inco-ordination. The peronei and tibialis anticus were weak and somewhat atrophied; the big toes hyper-extended; the appearance of the foot when in recumbent posture resembled that seen in the early stage of peripheral neuritis. The electric reactions, however, were normal; the superficial reflexes, except plantar reflex, were normal; the deep reflexes absent. There was no anesthesia; when walking and standing, there was marked lordosis. No affection of the bladder or rectum. Intelligence fairly good; growth somewhat stunted. With the peroneal type of myopathic atrophy this case, owing to the atrophy and weakness of the peronei, had some resemblance; but the marked ataxy, the absence of anesthesia, and the normal state of the electrical reactions were sufficiently distinguishing.

AN ANALYSIS OF TWENTY-FOUR CASES OF ENTERIC FEVER IN CHILDREN.

Wightman (*British Medical Journal*, May 5, 1894) publishes an analysis of twenty-four cases of typhoid fever in children under thirteen years received at the Liverpool Infirmary for Children during 1892 and 1893. There were three deaths. One from pyemia, one from perforative peritonitis, and one from exhaustion. No reference is made to the treatment used.

Temperature. In all cases there was elevation of temperature, but rarely as high as 104° F. There were no relapses. A not uncommon occurrence, after the temperature had become normal, was a slight rise for

a day or two on first adding semi-solid food to the diet, but this subsided, and was not accompanied by any further cause for anxiety.

Spleen. Enlargement of the spleen, discoverable by palpation, occurred in eight cases.

PROGRESSIVE PARALYSIS OF MUSCLES OF EXTREMITIES AND TRUNK IN
A GIRL OF FOURTEEN, FOLLOWING SCARLET FEVER.

At the March meeting of the Sheffield Medical Society, Dr. Porter showed a girl, æt. 14 years, the subject of progressive paralysis of muscles of extremities and trunk. She had scarlet fever six years before. There was loss of reaction to both galvanic and Faradic currents; pronounced lordosis on standing; knee-jerks abolished; family history negative.—*British Medical Journal*, April 21st, 1894.

Rash. Typical typhoid (rose) spots were seen in fifteen cases.

Bowels. (a) Constipated, 10; (b) typical stools (that is, corresponding to the typhoid "pea-soup" motion of the adult) in three cases only; (c) apparently normal, 3; (d) loose and offensive, but not typical of anything, 8. Enemata had to be given during the acute stage in seven cases, and during convalescence in seven cases also.

Cause of death. The causes of death in the three cases mentioned above were as follows:

Pyemia (girl, aged 13 years) secondary to acute necrosis of the terminal phalanx of a finger; the form of pyemia being innumerable superficial abscesses.

Perforative peritonitis (boy, aged 12). Symptoms coming on one hour after the administration of a glycerine enema, the child dying forty-eight hours afterwards. The *post-mortem* examination showing a small perforation at the base of a typhoid ulcer two inches above the cecum; general acute peritonitis; the gut much thinned for some distance from the perforation; ten or twelve ounces of sero-purulent fluid in the general peritoneal cavity.

Exhaustion (girl, aged 8). The temperature kept high—104° F.—for about a fortnight, in spite of the usual antipyrexial treatment. The *post-mortem* examination showed many typhoid ulcers of the lower part of the ileum; some healing, some extending to the peritoneal covering, and some commencing.

PATHOLOGY

IN CHARGE OF

JOHN CAVEN, B.A., M.D., L.R.C.P. Lond.,

Professor of Pathology, University of Toronto and Ontario Veterinary College; Pathologist
to Toronto General Hospital and Home for Incurables.

THE PARASITE OF FAVUS.

MM. Constantin and Sabrayes have studied the course of favus in man, the dog, and the fowl. This study has led them to conclude that three distinct parasites are the cause of the disease in the three species mentioned.

The fungus found in human favus is nearly related to that of the dog, but distinguished from the latter by its appearance in culture, by the invariable structure of its mycelium, and by its color. The fungus found in favus of the fowl is altogether different from that found in favus of the human subject or the dog.—*Recueil de Médecine Vétérinaire*.—*Journal of Pathology and Therapeutics*.

THE INFECTIVITY OF THE BLOOD OF TUBERCULOUS CATTLE.

At the instigation of Bollinger, Hagemann has recently made some experiments with the view of ascertaining whether the blood of cattle affected with tuberculosis contains tubercle bacilli. Blood from six such animals was inoculated to guinea-pigs; in two of these cases the disease was moderately advanced, and in the other four the lesions were very extensive. In none of the cases was acute generalized tuberculosis present. For the experiments eleven guinea-pigs were used, and of these one died from purulent edema on the second day after inoculation. Of the ten others, nine remained healthy, while one proved to be extensively tuberculous seven weeks after inoculation (tuberculosis of the spleen, liver, and abdominal and thoracic lymphatic glands). The blood with which this guinea-pig had been inoculated was taken from a cow with very extensive tuberculous lesions, but in fair condition. The result of these experiments was similar to that obtained by Bollinger's pupils in earlier experiments with the milk and flesh of tuberculous cattle, but in the former experiments the milk and flesh were found to be much more frequently infectious. Bollinger calls attention to the fact that, since tuberculosis

develops more rapidly and shows greater tendency to generalization in the pig, the blood of that animal is probably much more frequently infectious than the blood of cattle. The blood of tuberculous pigs ought, therefore, to be excluded from human consumption, especially since the sausages in the manufacture of which it is used are generally imperfectly cooked.—*Zeitschrift für Fleisch und Milchhygiene*.—*Journal of Pathology and Therapeutics*.

A NEW URETHRAL DIPLOCOCCUS.

Immerwahr has found in blennorrhagic pus a new diplococcus, similar to the gonococcus both in form and tinctorial reactions, but differing from it in its cultural characteristics in the ordinary culture media in use. It is intracellular, is decolorized by Gram's solution, forms small gray, transparent colonies upon agar, and does not liquefy gelatine. Immerwahr believes this germ to be identical with the saprophyte described by French authors as the cause of epididymitis, and which they have named the orchococcus. This germ differs from the gonococcus chiefly in its size, and from the staphylococcus in complete absence of grouping in grape-bunch form.—*Rev. Intern. de Bibliog. Med.*, etc., Feb. 10, 1894.

EHRLICH'S DIAZO REACTION.

Julius Friedenwald has studied this reaction with some care, making personal observations in twenty-one cases of typhoid fever, in which disease it is very constant, making its appearance usually within the first week, and gradually disappearing between the second and third weeks.

In twenty-nine cases of severe pulmonary tuberculosis the reaction was almost constant; in fourteen light forms it was not shown. Its presence in this disease, extending over long periods of time, may therefore be regarded as a grave sign. The reaction was never obtained in healthy individuals.

The author emphasizes the following conclusions of Ehrlich: The diazo reaction is of great diagnostic value in typhoid fever. If the case shows a slight or no reaction between the fifth and eighth days, other appearances pointing to typhoid fever, it can be looked upon at once as an exceedingly light form, and the prognosis made accordingly. Gastro-intestinal catarrhs, accompanied by fever, always run their course without a reaction. Very marked and constant reactions may accompany mild forms of typhoid fever, and do not justify a bad prognosis. Reactions appearing continuously for a long time (two months) in phthisis pulmonalis always indicate a grave prognosis.—*New York Medical Journal*, December 23, 1893.

Editorials.

MEDICAL "FAKIRISM."

WE have recently been pondering over the meaning of the term "fakir," and, as a result, are now wondering why our text-books in medicine do not present their readers with some short or long account of the ways in which "fakirism" can be employed with benefit to either patient or practitioner. Benefit accruing to either would seem to completely justify the procedures classified under the term, and certainly our colleges, which brag of their equipment in modern ways and means, ought not to send out students minus a course in (im) morality, which would be of the greatest service to them hereafter. Many short-sighted individuals, students as well as practitioners, have complained bitterly of the fact that some preparations of drugs travel under more than one name, and have thus brought unsuspecting ones into trouble. Hitherto we have sympathized with the afflicted ones, but now we know ; for we have it on the best of authority that this pharmacopeial freak works, along with some other things, for the material benefit of the wise man. For example : A Canadian practitioner of high standing sends a patient to sojourn for a longer or shorter period of time in a part of the United States which he knows to be suitable from a climatic standpoint. The physician gives his patient a prescription to take with him and have filled from time to time, as found necessary. Fortunately for the patient, on his way to the spot recommended, by somebody's advice, he consults a great specialist, one whose name is to be found, perhaps, as often as that of any other, in the most recent text-book of medical practice written in America. The eagle eye of the great man instantly detects the danger of permitting a sick patient to take, for example, liquor arsenicalis when Fowler's solution would be so much safer and better ; and also of allowing him to sequestrate himself so far away that the Fowler's solution employed could not easily and quickly be examined to make sure that the proper amount of Fowler was present, and no more.

The medical profession is, of course, noted for its conservatism in more ways than one. Dare we ask Professor Osler to be liberal enough to see that something be done, when another edition of his "Practice" is called for, to give fakirs and fakirism *proper* recognition?

Our main object in writing will be achieved if our colleges can be persuaded to look into the subject, and see that, if necessary, the student may be taught evil that good may come of it.

THE ONTARIO MEDICAL ASSOCIATION.

THE Ontario Medical Association has nearly completed the thirteenth year of its existence, and will hold its fourteenth annual meeting in Toronto on June 6th and 7th. The first meeting of this society was held in Toronto, June, 1881, under the presidency of the late Dr. Workman, and was in all respects so remarkably successful that its promoters and friends, one and all, agreed in predicting for it a bright and prosperous career. We are much pleased to be able to state that the desires and hopes of the organizers have been fully realized, and that to-day our provincial association stands on a firm basis, and receives the cordial and active support of the profession of Ontario.

The following is a list of its presidents in regular succession: Dr. Jos. Workman, Toronto; Dr. C. W. Covernton, Toronto; Dr. J. D. Macdonald, Hamilton; Dr. D. Clark, Toronto; Dr. A. Worthington, Clinton; Dr. G. A. Tye, Chatham; Dr. J. H. Richardson, Toronto; Dr. J. W. Rosebrugh, Hamilton; Dr. W. H. Henderson, Kingston; Dr. J. Algernon Temple, Toronto; Dr. W. H. Moorehouse, London; Dr. R. A. Reeve, Toronto; Dr. R. W. Hillary, Aurora; Dr. L. McFarlane, Toronto. The association, though young in years, has been very unfortunate in having lost four of these through death, viz., Drs. Workman, Tye, Worthington, and Henderson.

We are glad to know that the prospects for the coming meeting are of the brightest sort. The president, and members of the various committees, especially those having charge of papers, business, and general arrangements, have been working assiduously, and have about completed their work of organization. We publish in this issue a provisional programme, which will give a partial idea of the work to be done. Several additional papers are, however, expected. It will be noticed that Drs. Fox and Robinson, of New York; Dr. W. H. Hingston, of Montreal; Drs. Herman Mynter and C. G. Stockton, of Buffalo; and Dr. Thos. S. Cullen, of Baltimore, have promised to read papers. Other prominent physicians have been invited, and will probably attend.

CONTRACT OR LODGE PRACTICE.

THE question of contract or lodge practice is surrounded by many difficulties. In Great Britain it is recognized as reputable, and in the interests of certain classes of citizens, especially in large cities. The average lodge doctor of England, however, is rather a poor specimen of a cultured and scientific physician ; and we think it is not in the interests of this new country to unduly endeavor to cultivate anything of that sort.

At the same time, it is sufficiently patent that we are making rapid strides in certain directions ; and contract practice has developed to such an extent and in such a way in certain localities that it has become a disgrace to our profession. We do not know that the system can ever be abolished entirely, but we certainly agree with the London Medical Society as to the desirability of taking some steps towards "minimizing the evil."

We publish in this issue a communication from the London Society on the subject ; and are pleased to note that its members do not simply protest against the system, and call wildly for its abolition, but, in addition, offer certain suggestions which, if carried out, would be likely to do much towards, at least, lessening the evil. We do not propose to discuss these at the present time ; but we hope that all those members of the profession in Ontario who are interested will take the trouble to consider the matter in all its aspects, and endeavor to convince the members of the Medical Council—a large number of whom have already shown a desire for radical reforms in the direction indicated by the London Medical Society—that there exists an urgent necessity for legislation in the near future.

THE INTERNATIONAL MEDICAL CONGRESS AT ROME.

THE latest detailed reports of the proceedings of the International Congress, in Rome, reveal little that is new or startling. The congress was certainly a huge affair, but not otherwise remarkable in any sense. There was nothing at all brilliant in the direction of scientific work ; there was little or nothing that can be called new in the work of the various sections. There were four official languages. In speaking of this, the *British Medical Journal* says : "It may be convenient and even courteous to assume that every one understands three languages besides his own, but it is not a theory that works in practice, and it would undoubtedly have contributed to the interest of the discussions if there had been but one official language, and that French, which appears to be spoken by most Italian medical men."

There has been a considerable amount of discussion as to the utility of such immense congresses, composed of men of different nationalities, speaking varied languages. The recent meeting at Rome was, we think, singularly unfruitful in the way of advancing medical science and art. Those who attended it with the idea of having a very pleasant and interesting outing were, as a rule, not disappointed. In fact, we may say that the great majority of visitors enjoyed themselves very much, and left Rome about as full of wisdom, in a medical way, as they were when they landed in the ancient city.

Notwithstanding certain drawbacks which are inseparably connected with very large gatherings of physicians, it is altogether likely that the International Medical Congress is a permanent institution, and will ever retain the general popularity which it now enjoys. Leading medical lights of different countries can scarcely meet without doing something in the way of developing that brotherly love which should exist amongst the members of our craft in the whole civilized world. Apart from any sentiment, we have learned much about Italy from the meeting in Rome; and the impressions received are likely to increase our respect for the grand army of Italian physicians who are working so earnestly and successfully in the interests of scientific medicine.

The next congress will be held in Russia. The choice appeared to lie between Russia and Spain, although Egypt also wants to hold a meeting. At the Berlin Congress in 1890, Russia extended a cordial invitation to the members; but Italy was chosen, with an implied understanding that the claim of the former country would be favorably considered at this meeting. A congress in Russia will certainly be interesting in many ways; and it is probable that we may, as the result of the next meeting, gain a knowledge of Russia's work in scientific medicine which will greatly increase our respect for the physicians of that vast country.

Correspondence.

LODGE PRACTICE.

To the President and Members of the Ontario Medical Council :

GENTLEMEN,—The London Medical Society hereby appeals to the Medical Council to devise, if possible, some means of abolishing or restricting the system of contract or lodge practice.

This society, in common with the profession in general, recognizes the necessity of some steps being taken to check this evil. The Medical Council has rendered valuable service in protecting the profession and the public from *unlicensed* practitioners. There has, however, grown up, within the ranks of licentiates themselves, this pernicious system, which is making greater inroads upon the field of regular practice than all forms of quackery combined ; and this society but voices the current sentiment of the profession in condemning the system, and appeals to the Council, as the guardians of the profession, to adopt some means of abolishing or minimizing the evil.

The society begs to offer the following suggestions :

(1) Apply for legislative authority to prohibit contract practice. With the prevailing contract rates at \$1 and \$1.50 per member, this prohibition might be shown to be in the interest of the public as well as the profession, inasmuch as indifferent service is a natural result of inadequate remuneration ; or

(2) Apply for legislative power to fix a minimum tariff of contract rates. The *Dominion Medical Monthly* for December, 1893, claims, on the authority of a distinguished actuary, that the proper remuneration for contract practice in Canada is \$4 a year per member ; or

(3) Apply to the Legislature for power to frame and enforce a code of medical ethics, with a view to control the evil ; or

(4) Address an appeal to every registered practitioner to discountenance the system. The influence of such an appeal, coming from the representative body of the profession, would tend to bring the practice into disrepute.

Signed on behalf of the London Medical Society,

J. H. GARDINER, M.D., President.
OCTAVIUS WELD, M.B., Secretary.

London, April 6th, 1894.

Book Reviews.

HEADACHE AND NEURALGIA. By J. Leonard Corning, M.A., M.D. New York : E. B. Trent.

The present edition, which is the third, is enlarged by the addition of an interesting chapter on "Localization of the Action of Remedies on the Brain." Altogether the work is very readable, and abounds in ingenious devices and valuable suggestions for the relief of the distressing affections with which the book deals.

THE NATIONAL DISPENSATORY, containing the natural history, chemistry, pharmacy, actions, and uses of medicines, including those recognized in the pharmacopœias of the United States, Great Britain, and Germany, with numerous references to the French Codex. By Alfred Stillé, M.D., LL.D., Professor Emeritus of the Theory and Practice of Medicine and Clinical Medicine in the University of Pennsylvania ; John M. Maisch, Phar.D., late Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy ; Charles Caspari, jr., Ph.G., Professor of Theoretical and Practical Pharmacy in the Maryland College of Pharmacy ; and Henry C. C. Maisch, Ph.G., Ph.D. Fifth edition, enlarged and revised in accordance with the seventh decennial revision of the United States Pharmacopœia, with three hundred and twenty illustrations. Philadelphia : Lea Brothers & Co., 1894.

The present edition of this work was rendered necessary by the numerous changes and additions in the recent revision of the United States Pharmacopœia. The work is a magnificent volume of about 1,900 pages. In the body of the work the drugs are arranged alphabetically, which is very desirable in such a large treatise. Each drug is described as to its origin or preparation, physical and chemical properties, impurities, tests, action, and uses. We are indebted for the greater portion of the materia medica and pharmacy contained in the volume to the late Prof. Maisch, who, happily, had completed his share of the work before his demise. The therapeutical portion of the work is under the control of Prof. Stillé, and is very complete as far as the use of drugs is concerned. He lays greater stress upon facts the result of clinical experience than upon pharmacology.

In the fifth edition of the work, many of the recent synthetic compounds and botanical preparations are introduced and fully described. The decimal system, as well as the British, is used in all weights and measures. In the appendix, lists of reagents used in qualitative and quantitative analysis are given, as well as many tables, such as thermometric equivalents, formulæ, and molecular weights of chemical compounds, etc., etc. The index is very com-

plete, and includes an "Index of Therapeutics," in which all the drugs in volume are classified under the different diseases in which they are of medicinal use. The work is splendidly gotten up, and a valuable book of reference to a physician.

AN AMERICAN TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE.
By American teachers. Edited by William Pepper, M.D., LL.D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania. In two volumes. Illustrated. Volume II. Published by W. B. Saunders, Philadelphia.

We reviewed the first volume of this work, and said: "It is undoubtedly one of the best text-books on the practice of medicine which we possess." A consideration of the second and last volume leads us to modify that verdict, and to say that the complete work is, in our opinion, the best of its kind it has ever been our fortune to see. It is complete, thorough, accurate, and clear. It is well written, well arranged, well printed, well illustrated, and well bound. It is a model of what the modern text-book should be.—*New York Medical Record*.

NEW AID SERIES OF MANUALS FOR STUDENTS AND PRACTITIONERS.

W. B. Saunders, of Philadelphia, announces the foregoing work as in active preparation. These Aid Series will not merely be condensations from present literature, but will be ably written by well-known authors and practitioners, most of them being teachers in representative American colleges. This new series, therefore, will form an admirable collection of advanced lectures, which will be invaluable aids to students in reading, and in comprehending the contents of "recommended" works.

Each manual, comprising about 250 pages, will further be distinguished by the beauty of the new type; by the quality of the paper and printing; by the copious use of illustrations; by the attractive binding in cloth; and by the extremely low prices, which will uniformly be \$1.25 per volume.

AN AMERICAN TEXT-BOOK OF THE DISEASES OF CHILDREN, including special chapters on Eye, Ear, Throat, and Nose; Diseases of the Skin, and General Management of Children. By Louis Starr, M.D., Physician to the Children's Hospital, Philadelphia, and late Clinical Professor of Diseases of Children in the University of Pennsylvania. In one royal octavo volume of 1,190 pages, profusely illustrated with woodcuts, half-tones and colored plates. Publisher, W. B. Saunders, 925 Walnut Street, Philadelphia.

The work is intended to be a practical book, suitable for constant reference by the practitioner and advanced student, and it seems to us to quite fill the place for which it was intended. The book consists of a collection of monographs by the best known teachers in this department in America. The author has aimed to make the work in every particular American, and American in the broadest sense; to this end he has gone from one side of the continent to the other in the selection of the sixty-three contributors whose combined articles make up the volume.

The book opens with an excellent and most instructive article on "The Clinical Investigation of Disease and General Management of Children," by Dr. Starr. The chapters on bacteriology contain the results of the most recent investigation in this department. With reference to the infective fevers, the portion devoted to them is most complete, particularly as to their nature and causation.

The writer on scarlet fever introduces the most beautiful and lifelike colored plates we have ever seen.

In this connection, we might remark that the illustrations with which the work abounds are unusually good. The colored plates, of which there are some twenty, showing the different skin diseases, blood conditions, and bacterial slides, are most perfect representations.

The chapters on diseases of the nose and throat are clear, and much attention is paid to formulæ and to technique in operative procedures.

Many beautiful colored plates, together with useful formulæ, make the portion devoted to skin diseases most complete.

A most important department in a work of this kind is the consideration of suitable foods for infants and young children, and also of the conditions which arise when unsuitable and indigestible food is given. In the work before us this subject receives careful treatment, and the views expressed appear to us to be in harmony with the most advanced scientific teaching.

Considering the work as a whole, we are glad to have an opportunity of recommending it to our readers as in every respect a most instructive and desirable book.

The following books have been received:

INTERNATIONAL CLINICS. A quarterly of clinical lectures on medicine, neurology, pediatrics, surgery, genito-urinary surgery, gynecology, ophthalmology, laryngology, otology, and dermatology. By professors and lecturers in the leading medical colleges of the United States, Great Britain, and Canada. Edited by John M. Keating, M.D.; Judson Daland, M.D.; J. Mitchell Bruce, M.D., F.R.C.P.; and David W. Finlay, M.D., F.R.C.P. Published by the J. B. Lippincott Company, Philadelphia. Volumes II., III., IV. of Third Series. Volume I. of Fourth Series.

SAUNDERS' QUESTION COMPENDS. Essentials of Nervous Diseases and Insanity. Their symptoms and treatment. A manual for students and practitioners. By John C. Shaw, M.D. Second edition revised. Published by W. B. Saunders, Philadelphia.

SAUNDERS' QUESTION COMPENDS. Essentials of Practice and Pharmacy. Arranged in the form of questions and answers prepared especially for pharmaceutical students. Second edition. Edited by Lucius E. Sayre, Ph.G. Philadelphia: W. B. Saunders.

HYDATID DISEASE. A collection of papers on hydatid disease, by the late John Davies Thomas, M.D. Lond., F.R.C.S. Eng. Edited by Alfred A. Lindon, M.D. Lond. Publishers, L. Brèck, Sydney, and Baillière, Tiddall & Cox, Strand, London.

Medical Items.

A PROGRAMME of the proceedings of the June meeting of the Ontario Medical Association will appear in the Toronto newspapers, June 4 and 5.

DR. RIDLEY MACKENZIE has been appointed Medical Superintendent of the Montreal General Hospital.

DR. R. B. NEVITT, of Toronto, spent a couple of weeks in April in the Johns Hopkins Hospital, Baltimore.

THE firm of William Warner & Co., Philadelphia, have been awarded a silver medal for their exhibit at the International Congress held at Rome.

DRS. BRUCE RIORDAN, James T. Thorburn, and Thomas McKenzie have gone to the meeting of the American Railway Surgeons at Galveston, Texas.

DR. JOHN H. GIMBY, of Warton, has been appointed Associate Coroner for the county of Bruce; and Dr. Hugh S. Bingham, Associate Coroner for the county of Ontario.

PROFESSOR OSLER, of Baltimore, was in Toronto May 6th and 7th. He will sail for Europe May 24th, and intends to go at once to Paris, where he will remain some months.

DR. JOHN CAVEN, Professor of Pathology in the University of Toronto sailed for Europe on May 11. He expects to spend the summer on the continent, where he will be mostly engaged at laboratory work.

DR. GERALD O'REILLY, who has practised in Fergus for thirteen years, has sold out to his former partner, Dr. Armstrong. He expects to take a somewhat extended tour in Europe, after which he will return to this continent, and probably locate in Detroit.

DRS. J. E. GRAHAM, G. R. McDonough, W. P. Caven, A. McPhedran, Edmund E. King, B. E. McKenzie, G. A. Bingham, and J. F. W. Ross are going to the meeting of the Congress of American Physicians and Surgeons to be held in Washington, May 29th to June 1st.

DR. MACKID, of Calgary, is in town on his way from Vienna. The doctor and his wife have been away since December. He says that the depression in the United States has made a decided impression on the number of American physicians who annually visit Europe.

DR. GEORGE PETERS, of Toronto, gave an exhibition of some of his work in parian cement and plaster of Paris in St. George's Hall, Toronto, May 15. It included busts of the Lieutenant-Governor of Ontario, Hon. John Beverly Robinson, Sir Casimir Gzowski, and many other prominent citizens, all of which were much admired by those in attendance.

A MEETING of physicians of West Toronto was held on April 7, when an association was formed under the name of the West Toronto Territorial Medical Division. The following officers were elected : President, Dr. Arthur Jukes Johnson ; vice-presidents, Drs. A. A. Macdonald and A. Hamilton ; secretary, Dr. Carveth ; council, Drs. Orr, Spence, and McPhedran.

THE following officers of the Toronto Clinical Society were elected at the May meeting : President, Dr. G. Sterling Ryerson ; vice-president, Dr. J. E. Graham ; corresponding secretary, Dr. Allan Baines ; recording secretary, Dr. D. C. Meyers ; treasurer, Dr. A. R. Atherton. Executive Committee—Drs. J. H. Burns, W. H. B. Aikins, L. McFarlane, Edmund E. King, Joseph Leslie.

WE regret exceedingly to report that Dr. Ingersoll Olmsted, who, a few months ago, went from Hamilton to Philadelphia, is suffering from a serious attack of septicemia. When the symptoms appeared he returned at once to Hamilton, and placed himself under the care of Drs. Malloch, Mullin, and Edgar, in the General Hospital. We understand, at the time of writing, that he is improving slowly.

THE ONTARIO MEDICAL ASSOCIATION.

The following is the provisional programme of the fourteenth annual meeting of the Ontario Medical Association :

The President's Annual Address.—L. McFarlane, Toronto.

Discussions :

(1) "On the Treatment of Strangulated Hernia"—J. Wishart, London ; F. W. Strange, Toronto ; R. Whiteman, Shakespeare ; G. S. Rennie, Hamilton.

(2) "On the Treatment of Chronic Diseases"—J. E. Graham, Toronto ; R. W. Bruce Smith, Seaforth ; R. H. Preston, Newboro.

(3) "On the Use of Strychnia in Ordinary Practice, with special reference to Pneumonia and Chronic Heart Disease"—J. H. Duncan, Chatham ; J. T. Fotheringham, Toronto ; A. C. Gaviller, Grand Valley ; H. J. Sanders, Kingston.

(4) "On Placenta Previa"—J. Algernon Temple, Toronto ; A. McKay, Ingersoll ; G. T. McKeough, Chatham.

(5) Symposium on Influenza : "Its General Features"—L. M. Sweetnam, Toronto. "Its Nervous Phenomena"—S. Lett, Guelph. "Its Thoracic Phenomena"—Chas. Sheard, Toronto. "Its Digestive Phenomena"—T. S. Harrison, Selkirk.

Papers by guests :

(6) "Cancer of Breast in its Clinical Aspect"—W. H. Hingston, Montreal.

(7) "Cholecystenterostomy and Gastroduodenostomies by aid of Murphy's Buttons"—H. Minter, Buffalo.

Papers are also expected from A. R. Robinson, New York ; G. W. Fox, New York ; T. G. Roddick, Montreal ; J. C. Cameron, Montreal ; J. Stewart, Montreal, and others.

Papers by members :

(8) "Atrophic Rhinitis"—J. Price Brown, Toronto.

(9) "The Contagiousness of Diphtheria"—J. R. Hamilton, Port Dover.

(10) "Artificial Feeding and Care of Infants"—J. W. S. McCullough, Alliston.

(11) "Placenta Previa"—A case : J. Campbell, Seaforth.

(12) "The McGill Operation for Prostatic Enlargement, with cases"—A. McKinnon, Guelph.

(13) ————A. B. Welford, Woodstock.

(14) ————J. M. Cotton, Lambton Mills.

(15) "Photographing of Pathological Specimens"—N. A. Powell, Toronto.

(16) "Treatment of Consumption"—E. Herbert Adams, Toronto.

(17) "Law versus Practice in Therapeutics"—G. M. Aylesworth, Collingwood.

(18) "Inflammation of the Frontal Sinuses"—F. N. G. Starr, Toronto.

(19) "Cholecystotomy"—R. Whiteman, Shakespeare.

(20) ————R. King, Peterborough.

(21) "Cephalhematomata"—E. Bromley, Bright.

(22) "Surgical Interference in Typhlitis. When? How?"—G. A. Bingham, Toronto.

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(30) ————William Britton, Toronto.

(31) "Report of Some Cases of Abdominal Sections, with Remarks on Same"—H. Meek, London.

(32) "Suprapubic Lithotomy : A Case"—W. J. Gibson, Belleville.

(33) ————J. E. Eakins, Belleville.

(34) "Therapeutics of Diuretin"—A. McPhedran, Toronto.

(35) "Papilloma of the Ovary—Report of two Cases, with Photographs and Drawings"—J. F. W. Ross, Toronto.

(36) ————D. J. Gibb Wishart, Toronto.

OBITUARY.

DR. N. R. OLIVER, of Brampton, who retired from active practice many years ago, died April 11th, at the age of eighty years.

DR. A. G. FENWICK, of London, Ontario, died suddenly on May 14, from apoplexy, at the age of 76. He was educated in McGill Medical College, and secured his license to practise in 1840. He lived in the Province of Quebec until 1875, when he went to London. He was Dean of the Medical Faculty of the Western University, Professor of Medical Jurisprudence, and the representative of the university in the Ontario Medical Council. He was highly respected by all classes in London and vicinity, and dearly loved by his intimate friends.

DR. EDWARD BULL, of Toronto, died at his late residence, 131 Bloor street, April 25th, in his 71st year. He graduated in Victoria University in 1845. After practising two years at Bond Head he went to Lloydtown, where he remained until 1864. He then removed to Weston, where he was engaged in practice until 1876, when he retired from active work, and removed to Toronto. He had a large and lucrative practice in Weston, and was well known and highly respected in West York, where he was once a candidate in the Liberal interest for the Dominion Legislature. He had a large circle of warm friends, professional and otherwise, in Toronto, who feel very deeply the loss they have sustained by his death.

THE CANADIAN PRACTITIONER

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THE ADDRESS IN MEDICINE,

DELIVERED AT THE FOURTEENTH ANNUAL MEETING OF THE ONTARIO MEDICAL ASSOCIATION.

By J. E. GRAHAM, M.D., M.R.C.P. LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto ; Physician to the
Toronto General Hospital, and St. Michael's Hospital.

Mr. President, and Members of the Ontario Medical Association :

IN response to the kind invitation of your Committee on Papers, I shall endeavor in this, my address in medicine, to make a few remarks of a plain and practical nature upon the management of some chronic diseases frequently met with, emphasizing the necessity for greater care in the study of their etiology and early diagnosis.

This subject was chosen because I have been impressed, whether rightly or wrongly, with the idea that we, as general practitioners, do not in all cases pay that attention to the early treatment of chronic diseases which their importance demands.

The Ontario Medical Association, throughout its career, has been noted for the practical nature of its discussions, and the courteous but free criticism which has been given to the various papers read. The members have certainly never indulged in empty compliments, or taken up much time in passing meaningless votes of thanks, but have endeavored to render the meetings as useful as possible.

It is, therefore, with greater confidence that I approach this subject, and speak plainly of what I consider to be the duties and responsibilities of the profession in relation to the care of chronic cases.

Are we not too much inclined to look upon many of the chronic diseases as incurable, and therefore become too easily discouraged if our patients do not soon exhibit signs of improvement? At the recent International Medical Congress held in Rome, Dr. Jacobi made the following remarks, speaking of the treatment of acute diseases: "Many chances of saving human life are thrown away by too great delay in interfering medically, and this occurs especially in inflammatory and infective fevers. The so-called expectant method is frequently a most pernicious proof of indifference or ignorance." These remarks are applicable to the treatment of chronic as well as of acute affections, and often, for the same reason, a want of faith in our power to control the disease.

In reviewing my experience in practice, I can recall cases which I looked upon as incurable which have afterwards made good recoveries. I can also recall cases in which, on account of want of care in my diagnosis, a superficial and consequently unsuccessful line of treatment has been carried out, when a careful study of all the circumstances of the case might have led to the adoption of more thorough and radical methods.

We should, I think, exercise great caution before giving an unfavorable prognosis. Such an opinion will often prove injurious to the patient, and, if incorrect, will not add to the reputation of the practitioner. I think that in this respect we do not now err as often as formerly. We do not condemn a patient to early and sudden death because we hear a valvular murmur, nor do we consider him incurably ill with Bright's disease because we find albumin and casts in the urine. Those instances of want of success of which we have spoken are principally due to the following causes:

- (1) A faulty diagnosis.

- (2) Want of sufficient care in the study of the case, which results in the adoption of inadequate methods of treatment.

- (3) Want of faith in the use of remedies.

We must not here forget that in a large proportion of the unsuccessful cases the physician is, from the first, to a great extent, powerless; the disease is from its very nature incurable, the patient has not applied until serious organic changes have taken place, or, owing to uncontrollable circumstances, a thorough method of treatment cannot be adopted.

In the diagnosis of a chronic ailment, we should never be satisfied with the discovery of the pathological condition present without finding out the cause. We may, for instance, by careful examination, make a diagnosis of dilatation of the stomach; but unless we go further, and find out whether the dilatation is due to an abnormal condition of the gastric juice, to retained ingesta, to enfeeblement of the muscular walls of the stomach, or to all acting together, we will not likely succeed in our treatment.

To illustrate the point, the following brief histories of two cases of dilatation may be given :

Both patients were admitted under my care in the hospital about the same time last winter, and before an analysis of the gastric contents was made a diet was ordered for both consisting of scraped beef, thin toast, and milk. Lavage three times a week was prescribed, and strychnine was given.

The first patient, a young man, in whom the dilatation and accompanying catarrh were produced partly by taking large quantities of badly cooked food while working in a lumber camp. In his case the method of treatment adopted worked admirably. The gastric symptoms quickly disappeared, and the stomach became much reduced in size. The second patient was an elderly man, much enfeebled by exposure, and the condition of the stomach appeared to have been produced by taking badly cooked food while that organ was in an atonic condition.

In his case the treatment had an injurious rather than a good effect, and in a few days it was found necessary to change the diet to peptonized milk, to which, afterwards, a small quantity of farinaceous food was added.

About a week after their admission an analysis of the gastric juice was made in both cases.

In the first, hydrochloric acid and pepsin were both found in normal amounts. This accounted for the excellent digestion of meat.

In the second case, hydrochloric acid was not found, and pepsin existed in very minute quantity. Here was an explanation of the bad effects of a meat diet.

If in these cases an analysis of the gastric contents had been made before any treatment was adopted, an appropriate diet would have been given to each.

In the treatment of chronic gastric catarrh, we ought first to find out the exact condition of the stomach, the chemical character of the gastric secretion ; whether dilatation exists or not ; whether the movements are normal, and the rapidity with which absorption takes place. We have now means within our reach of obtaining an accurate knowledge in all these particulars. The analysis of the gastric juice is of special importance, as

one of the most frequent predisposing causes both of acute and chronic gastritis, in either a deficiency in quantity or defective quality of the gastric juice. It will, then, be necessary to investigate as to the patient's surroundings, habits of eating, drinking, and working. The condition of the stomach may be largely the result of mere exhaustion from overwork or anemia, and unless care is taken to remove this condition the direct treatment of the stomach may be unsuccessful.

It is safe to say that as great progress has been made in the treatment of diseases of the stomach as in any other department of medicine, and that we are now able to bring to bear upon the subject an amount of accurate scientific knowledge which was not conceived of even ten years ago.

The use of the soft rubber tube, as introduced by Leube and Ewald, has revolutionized our treatment of stomach diseases. Leube says: "With the introduction of this practice, the treatment of dilatation of the stomach has for the first time become a rational one, and all other remedies sink, by comparison, into the second and third rank." Ewald says: "The advantages resulting from this method are evident, and the only wonder is that it was not made use of earlier."

The question of the administration of acids or alkalies can best be settled by first ascertaining the chemical character of the gastric juice. Alkalies are often needed for the purpose of neutralizing acids, such as acetic and butyric, which result from fermentation; but they ought not to be given to neutralize the natural acid of the gastric juice. They should, therefore, be given near the end of the digestive process, or shortly before the next meal. Hydrochloric acid, on the other hand, may be given with benefit when there is a deficiency of that acid, and the proper time for administering it is shortly after the meal.

Notwithstanding the great advances, only a few of which we have spoken of, how often are we tempted to go on in the old way, to give a tonic or some aid to the digestion which may temporarily relieve the patient, but will not cure the case. This is, no doubt, largely due to the great amount of labor involved in making the analysis, and the difficulty of finding time to devote to it. Of this I shall speak hereafter.

Now, let us turn our attention to an entirely different class of cases—the chronic inflammation of the kidney, generally spoken of under the head of Bright's disease. The subacute and chronic forms in which the glomeruli and tubes are primarily affected shall be more particularly referred to.

It is a matter of doubt if in these cases we are not too apt to give an unfavorable prognosis, and to treat the patient from the first, not with the hope of curing, but simply of ameliorating the symptoms and of prolonging the life. Who can draw the line, in many cases, between the curable

and incurable? Or who can, in a certain case, say when it passes into the incurable stage?

It is sometimes said that a case is incurable when the symptoms extend beyond a period of six months. I have seen one recover after the symptoms had been nearly a year in existence. Bartels mentions three cases in which anasarca lasted eighteen, twenty, and thirty years respectively, and in all of which a complete recovery was made, so far as the dropsy was concerned. One died of pericarditis three years after the disappearance of the fluid, the second two years after from pneumonia, and the third died of toxemia. Fagge mentions two cases of recovery, one after six years, and another after twenty months. When, therefore, a case of subacute parenchymatous nephritis first presents itself for treatment, and we find albumin, together with hyaline and epithelial casts, as well as the constitutional symptoms of the disease, if cardio-vascular changes have not taken place to too great an extent, we should make an effort to cure the patient. We should not be satisfied to give remedies which will uniformly relieve the kidneys, but we should put the patient under a thorough course of treatment, both as to diet and general régime. In fact, we should place the patient in such a position that nature will have the best chance to overcome the disease.

The inflammation of the kidney is due to some continued form of irritation which may be the result of the presence of bacteria, of toxins produced by bacteria, or the toxin produced in a faulty metabolism. These causes should, if possible, be removed, and the weak and diseased organ should be guarded against all outside forms of irritation. Chilling of the surface of the body, which we know has a directly injurious effect upon the kidney, should be especially prevented. We also know that rest is essential to the treatment of any form of inflammation. To accomplish both of these objects, it will, therefore, be necessary to enjoin rest in bed in a room in which the temperature is even. I am not at all certain that we have yet discovered the form of diet best suited to these cases. We are too much governed by the idea that nitrogenous food is always bad for the patient, and that milk and farinaceous food are always indicated. I have had under observation a patient, a physician, suffering from chronic parenchymatous nephritis, who is always benefited by the use of a strictly meat diet. On two different occasions the albumin has been made to disappear from the urine and the general symptoms to improve by an exclusive diet of scraped beef. In such a case it would seem that the patient was not able to assimilate milk or starchy food. He had also tried an exclusively milk diet, without any effect upon the symptoms. The urine was at all times free from sugar.

It cannot be doubted that, in the great majority of cases, a large

amount of nitrogenous food is injurious, but there are exceptions, as in the case above mentioned. The whole question of diet in disease depends largely upon individual peculiarities. Although man is an omnivorous animal, some individuals, so far as their digestive and assimilative powers are concerned, belong rather to the herbivora, while others belong to the carnivora. Some digest starch and sugar better than meat, while with others the opposite is the rule.

A careful study of the urinary sediment will often enable one to judge if the diet is suitable. An abnormally large quantity of lithates will indicate a malassimilation. There is no specific treatment known for parenchymatous nephritis. I have not time to go further into the management of cases, so far as the edema and the neuromia are concerned.

I am sure I must express the sentiments of all present when I deplore our great lack of success in the treatment of that very prevalent and fatal disease, pulmonary tuberculosis. Patients seek our advice in what we consider the earliest stages, and, notwithstanding all our efforts, notwithstanding the great advance which has recently been made in the study of its etiology, we are compelled, in many cases, to be mere witnesses of the gradual decline and fatal termination, without being able, in any material way, to influence the course of the disease.

It is probable that, as long as the present state of society exists, this will continue to be the case, so far as the poorer classes are concerned. From the very nature of the disease, I do not think it at all likely that we shall ever find a specific, a true germicide. We must, therefore, resort to the inherent vitality of the animal cells to successfully withstand the invasion of the bacilli. So long as we are unable to change the surroundings of the great mass of our consumptive patients, we cannot hope to assist, in any great degree, the leucocytes in their conflict with the germs of tuberculosis.

At some future time, perhaps, when the public becomes more fully aware of the nature of the disease, the great mortality attending it, as well as of the great loss, commercially speaking, produced by it, the government or private benefactors will provide for our consumptive patients public institutions in the same way as asylums are now built for insane cases. Not until some such movement is made will it be possible for us to grapple successfully with this terrible disease, as it exists among the poorer classes.

The question here arises, Do we achieve all that is possible in our treatment of the disease as it is found in the wealthier classes? Are we sufficiently careful in making an early diagnosis?

A suspected case should be kept under constant observation, and frequent examination of the chest and of the sputa should be made until we

are quite satisfied that there is no further danger. How many of us make careful and frequent examination of the sputa? Yet the life of a human being may be saved by our care or lost by our negligence. Great are the rewards in our profession, and correspondingly great are its responsibilities. The examination of the sputa is of such value on account of the positiveness of the diagnosis when the bacilli are found. We may be suspicious of the condition of a lung after physical examination, but we may not be sufficiently convinced of the presence of tuberculosis to advise the patient to change the whole course of his life—to give up business, for instance, or to move to a more favorable climate. When, however, the bacillus is found, we have no longer any doubt, and can, with assurance, advise the patient as to the course which he should pursue.

In a paper which I had the honor of reading before the Dominion Medical Association two years ago, after giving the results of different methods of treatment of pulmonary tuberculosis, I mentioned the fact that, under any circumstances, we shall be compelled to treat a large proportion of these patients at their own homes. I then ventured to express the opinion that the hygienic management of the disease could be frequently carried out at home, and that as good a measure of success could be achieved as in those cases sent to other climates.

When a patient comes to us in the earlier stages of the disease, and when we are convinced that the case is not of the acute form, we should assure the patients, as well as the friends, of the possibility, and, in some cases, of even the probability, of a cure if the details of treatment are thoroughly carried out. We should look upon a patient with a diseased lung in somewhat the same way as with a broken limb; so that, leaving every other consideration aside, we should at once place the case in such a position that nature will have every chance to heal the diseased organ. I am strongly opposed to the practice of sending such patients to a warm climate, with no other directions than simply to go there and afterwards follow the dictates of their own judgment. In too many instances they unnecessarily expose themselves to cold and exhaustion, become chilled, and, as a result of lowered vitality, the disease makes more rapid progress. When such cases are sent away they should be referred to some experienced physician, and advised to remain constantly under his care and observation. Whether a patient remains at home or goes abroad, he should be under constant treatment so long as there is any evidence of active disease. During the last two or three years I have been in a position to observe the progress of some cases treated at home by careful attention to hygiene and the use of appropriate remedies, and have been much gratified with the results. A marked improvement was noticed even in some advanced cases, and an apparent cure in a few in whom the disease had

just commenced. The method adopted was an imitation of that carried out by Dr. Dettweiler and Dr. Turbon at their special hospital, and as described in my paper already alluded to.

Of the many remedies recommended for pulmonary tuberculosis, I regard creasote as that one which is most frequently followed by positively good results.

When all signs of the disease have passed away a line of life should be mapped out, so that recurrence of the disease may be prevented. Here many difficulties arise. The patient is often unable or unwilling to follow the instructions given, and finally becomes a victim to the malady.

The management of the various forms of anemia is a matter of great importance. Here, again, it is not only necessary to make a diagnosis of anemia, but to find the cause of the defective blood condition.

I have lately had under treatment four cases of anemia whose histories are very instructive in this respect. The first, a man over 50 years of age, was pale, and complained of distress and vomiting after eating. A microscopical examination of the blood revealed a greatly diminished number of red corpuscles, as well as of hemoglobin. The corpuscles were irregular in form. Megalocytes and microcytes were also present. The diagnosis made was the gastric form of anemia. The stomach was washed out every second day, an appropriate diet ordered, and arsenic was given. Rapid improvement followed, and the patient left the hospital in five weeks apparently well.

The second case, a woman of 55 years of age. Very anemic, heart dilated, dyspnea on exertion. Complained of nausea, and had frequent attacks of diarrhea. There was, however, very little, if any, emaciation. Moderate elevation of temperature. The clinical symptoms pointed to pernicious anemia; but, upon a microscopical examination of the blood, to our surprise we found the corpuscles not much diminished in amount, nor much changed in form or size, but a marked diminution of the hemoglobin. Upon examination of the urine we did not find either albumin or sugar, but we discovered a marked diminution in the urea excreted, one-sixth of the normal amount at our examination. We therefore concluded that the patient was suffering from a simple anemia, perhaps due to the impurity of the blood from retention of urine. No doubt the dilated heart also aggravated the condition. Rest, massage, careful dieting, and the administration of iron and arsenic produced a very great improvement.

In the third case, a woman of 37 years, the anemia followed confinement, and was probably due to the absorption of toxic matters during or shortly after confinement.

April 1. The red corpuscles were much diminished in number,

1,464,000 per c.m.n. Megalocytes and microcytes were seen. Poikilocytosis was also well marked.

April 13. Red corpuscles, 1,672,000 per c.m.n.

May 2. Red corpuscles, 3,400,000 per c.m.n.

The treatment adopted was arsenic, massage, and good diet. She left the hospital, May 8, almost quite well.

The fourth case was one of idiopathic anemia, in which we could find no cause for the disease. The principal symptoms were weakness, pallor, dyspnea, exertion, and vomiting, and diarrhea at times. Emaciation slight; slightly elevated temperature.

April 9. Number of red corpuscles, 1,800,000.

April 16. Number of red corpuscles, 1,400,000.

In this case massage was adopted, arsenic given, and the stomach was washed out twice a week. It was exceedingly difficult to find any kind of food which he could relish. On April 26th he left the hospital unimproved.

In this case we did not really find out the cause of the anemia, and, perhaps, partly for that reason we were quite unsuccessful in treatment. We have much to learn about these cases of so-called true idiopathic anemia.

I might further illustrate the importance of the use of every means which modern science affords in the diagnosis and treatment of chronic diseases. I might, for instance, refer to the great success now attending the treatment of neurasthenia. I well remember, while attending the meeting of the British Medical Association at Worcester in 1882, hearing the remarks made by the late Dr. Mahommed in a discussion of one of the earlier papers on the subject by Weir Mitchell. The plan of treatment, he said, commended itself to him on account of its thoroughness, and the attention to the minutest detail. He went on to deplore the half-hearted way in which physicians often undertake the treatment of chronic diseases.

We frequently hear the assertion made that while there has been great progress in the science of surgery very little headway has been made in internal medicine. I am very skeptical about the truth of this statement, and am rather of opinion that, if it were possible to obtain statistics, we would find that in successful treatment the science of medicine has kept well abreast of its sister department. It may, however, be safely said that the physician has not taken advantage of the results of investigation as soon as the surgeon.

The principal reasons for this may be stated :

(1) The great difficulty in applying many of the later methods. In the treatment, for instance, of stomach diseases, the analysis of the gastric juice is a matter of great importance. To make the analysis a small

laboratory is necessary. How difficult it is for the practitioner, after having acquired the necessary knowledge, to find time to give to such complicated methods!

Again, the detection of the pathogenic bacteria is often of great importance. For this a microscope of high power is required, as well as a number of chemicals often difficult to procure.

It has occurred to me that the science masters in our collegiate institutes might be encouraged to take up the work. They have the laboratory and much of the necessary apparatus at hand, and a little attention to this department would enable them to analyze animal fluids correctly. They might also acquire sufficient knowledge of bacteriology to examine for the bacilli of tuberculosis, as well as other micro-organisms.

Then, again, we cannot, as a rule, see in medicine the results of treatment as in surgery. We can, however, point to some very striking results in chronic cases. The cure, for instance, of stomach dilatation, of anemia, of neurasthenia, of myxedema by thyroid extract, and even of tuberculosis.

The success has been quite sufficient to encourage us to put forth greater efforts in this direction. The work done in our medical colleges should be thorough and quite up to date.

We have found that the establishment of a fully equipped laboratory in connection with the Toronto General Hospital has been of great advantage not only in the education of the student, but also in the successful treatment of the patients. The vast extent of knowledge now to be acquired makes greater demands upon the student's time and energy, and the Ontario Medical Council acted wisely in lengthening the course.

In looking over some old numbers of London *Punch*, not long ago, I came across two very suggestive pictures. One represented the medical student of 1846, and the other one of 1886. In the former the student, evidently of the Bob Sawyer type, sat lazily before the fire, his feet resting on the mantelpiece, a pipe in his mouth, and a mug of ale by his side. Upon the table were a copy of *Bell's Life* and a guitar. The walls of the room were decorated with the portraits of renowned pugilists and horse jockeys. Upon the mantelpiece was a skull, a pipe placed between the maxilla, and crowned with a worn-out beaver.

The man of '86 sat at his desk deeply engaged in his work, and everything about him gave evidence of the presence of an earnest, painstaking student.

We are pleased to observe that the medical students of the '86 type are becoming more and more in the majority, and those of the type described by Dickens are rapidly passing away, and will, we hope, soon become an extinct species.

In conclusion, I will repeat the points which I mean to emphasize in this somewhat rambling address :

(1) That we should be more hopeful in the success of treatment of some chronic affections.

(2) That greater care in the early diagnosis, and more attention to details in treatment, would ensure greater success.

(3) That we should, as far as possible, endeavor to make practical use of all the more recent discoveries made in the pathology and management of chronic diseases.

McGILL'S OPERATION FOR PROSTATIC ENLARGEMENT, WITH THREE CASES.*

BY ANGUS MCKINNON, M.D.,
GUELPH, ONT.

THE vesical disturbances directly due to prostatic hypertrophy are so common, and so distressing, that I need offer no apology for bringing this subject before the association for discussion. There may be considerable hypertrophy, when the direction of principal growth is downward, without giving rise to any bladder symptoms. But when the growth extends into the bladder cavity, it sets up irritation from its presence, and renders the patient eventually unable to empty the organ completely. This condition may be fully relieved, at least for a time, by the regular and proper use of the catheter. In some cases this relief may continue for many years, perhaps for the remainder of life. Generally, however, cystitis slowly develops, and may become so severe that the patient spends most of his time, day and night, in painful efforts to empty the bladder—the urine being ammoniacal, and containing slimy mucus, blood, and pus. Life in such a condition is unendurable. The patient urgently demands relief at the hands of the surgeon, failing which he will gladly welcome death as a happy release. In these cases, the operation now sometimes called by the name of the lamented McGill offers not only the prospect of relief, but also a hope that the natural bladder function may be restored. Too frequently the operation is so long delayed that there is no reasonable chance of success. The patients are so worn out by suffering that they have no power to bear the necessary shock of operation, or there may be a pyelo-nephritis already developed from the old cystitis. In such conditions a high death rate should not be a matter of surprise. The operation may also be required in less advanced cases. For example, in patients where the use of the catheter causes considerable hemorrhage; where, from enlargement of the middle lobe, it is difficult even for the surgeon to pass an instrument; and also where, from any cause, it is impossible to teach the patient the proper use of the catheter.

*Read before the Ontario Medical Association, June 6th.

Diagnosis. Ordinary hypertrophy of the prostate is easily recognized by rectal examination. When the hypertrophy is intravesical, no reliance should be placed on such examination, because there may be a large growth in the bladder, yet by the fingers in the rectum no enlargement of the prostate can be recognized. In these cases, in addition to the ordinary symptoms of cystitis, some residual urine will always be found in the bladder. On using the catheter, it will be found that a longer instrument is required. Failure to relieve retention sometimes arises from the use of a catheter which does not reach the bladder cavity. Buckston Brown says : " If the urethra is nine inches long or more, and if not much enlargement can be felt by rectum, there is almost sure to be intravesical hypertrophy."

The absence of evidence of tubercle in any other organ in the body will add probability that the prostatic enlargement is not due to tubercular disease, and the history, often showing a duration of six, eight, or ten years, will aid in excluding cancer.

Method of operation. The suprapubic method of opening the bladder in order to remove prostatic obstruction was very ably commended to the attention of surgeons in several articles by the late Mr. McGill, of Leeds. It was largely due to his advocacy that it was so generally adopted, though Belfield, of Chicago, was the first surgeon who removed, in 1886, a portion of the prostate by this method. Jessop, Atkinson, Harrison, Mayo Robson, Teale, Buckston Brown, Bennett May, McEwen, Mansell Moullin, Bruce Clarke, Jordan Lloyd, Belfield, and Keyes have placed themselves on record as favoring this method. The list does not include the illustrious Sir Henry Thompson, from whose writings I quote the following : " I am entitled to require that if it does happen or has happened to any surgeon to divide or remove any part of the enlarged prostate for a patient who had previously been compelled to pass all his urine by catheter, say, for a period of twelve months, and after the division in question he was enabled to dispense with the instrument, or at any rate to pass, say, half his urine by natural effort, the case should be seen and examined by others. I have long wished to see this sight, and have travelled considerable distances, abroad and elsewhere, expressly seeking it, but so far without success." Thus implying, in the strongest words, his disbelief that any operation on the enlarged prostate could restore the natural bladder function to a patient who had been dependent on the catheter for a year or longer. In answer to this wholesale skepticism of the work of other surgeons, Buckston Brown furnishes the full history of a man who had passed all his urine by catheter for ten years, and who was in a position months after the operation to say that he voided all his urine naturally, and could retain it for six or eight hours. So many similar cases have been placed on record

that, notwithstanding Sir Henry's want of faith, it must be admitted that this operation may restore the power to void urine naturally to many patients who have been dependent on the catheter for years. It is not claimed that it will do so in every case.

Any surgeon who performs suprapubic cystotomy for the first time will be amazed at the ease with which the finger, through the wound, can explore every part of the bladder. If there be a stone, even if it be encysted, and unrecognized by the more usual methods, he finds it readily. He can ascertain if the organ be unduly contracted, sacculated, or if there be any other tumor within it besides the enlarged prostate. The extent and form of this enlargement he can easily define; also its hardness, whether it involves the lateral or middle portions, and the practicability of its removal. Compared with any possible examination by the finger through the perineal route, any surgeon who once explores the bladder by the suprapubic method will admit its very great advantages. Though the exploration is so simple, I do not claim that the removal of the prostatic growth is by any means easy. On the contrary, McGill, on one occasion, found the growth so intensely hard that he failed to remove the obstruction, and the patient received no benefit. Belfield mentions a case where he found a hard mass in the middle lobe, occupying the floor of the urethra, that he could not remove from within the bladder. He made a median perineal incision, and, with the point of the finger so introduced, he succeeded in dislodging the mass.

Mr. McGill mentions that this operation is not indicated in cases where the bladder is much contracted, with thick, non-distensible walls. Simple drainage will give as much relief.

Technique. Possibly owing to prejudice in favor of the perineal method, or on account of the unfavorable statistics published, suprapubic cystotomy is seldom practised by the general surgeon. I may, therefore, be pardoned for presenting a few suggestions as to its performance. The operation is extremely simple, and, if performed with reasonable care, the peritoneum should not be exposed to injury. The use of Petersen's bag I do not regard as essential, nor is it necessary to place the patient in the Trendelenburg posture, though in certain cases such a position may facilitate operation.

Before the operation the bladder should be thoroughly washed out with a warm solution of boracic acid, and six or eight ounces, or more, left in it.

The incision in the abdominal wall should be precisely in the median line, from three to four inches long, and extending upwards from the upper border of the symphysis. The part of the incision nearest the pubes should be carried boldly down through all the structures, separating

the prevesical fat with the finger or handle of the scalpel. A large, long-curved sound should now be introduced into the bladder, and its point turned upwards close behind the pubes. The finger in the bottom of the wound should readily feel the point of the sound through the wall of the bladder. An assistant should keep the sides of the wound well separated by suitable retractors, and another, by means of the sound in the bladder, should keep its front wall well up in the bottom of the wound. The bladder should be opened on the point of the sound, a probe-pointed knife being used to extend the incision downward. Once the finger can be introduced, any necessary extension of the incision should be guided by it. Before proceeding to remove the prostate, the lips of the bladder incision should be securely attached to the deeper parts of the abdominal walls by sutures, and, at the completion of the operation, a suture should be inserted at the lower angle to attach the bladder at this point also to the abdominal wall, as a security against urinary extravasation into the retro-pubic space.

The mucous membrane over the projecting part of the prostate should be snipped through with a knife or scissors, but, when possible, it should be enucleated by the finger. The removal should be accomplished by the finger and forceps rather than by sharp-cutting instruments, which cause severe hemorrhage. Whether it be the lateral lobes or the middle lobe, all of the gland that projects into the bladder should be removed. Sometimes there is only a little nodule to be removed. In other cases the mass is very large. From one of Mr. McGill's patients he removed a mass weighing about half a pound.

The prostatic portion of the urethra should be carefully examined. The aim of the operator should be to dilate it very fully, and to lower the level of its floor, so that it will readily drain the whole base of the bladder. It is only by careful attention to these two points that the operation can be successful in restoring the power to pass the urine by natural effort. Belfield advises, in those cases where it is not possible, by operation within the bladder, to obtain a sufficiently low level for the urethral floor, to make a perineal incision also. If necessary, such additional incision may be quickly made, and should not materially increase the gravity of the operation. A large drainage tube should be kept in the bladder for forty-eight hours. The upper part of the incision should be closed by two or three sutures. Very hot water is usually sufficient to check undue hemorrhage.

Results. I cannot deny that published statistics up to the present time give a very high death rate after suprapubic cystotomy. Judging from my own limited experience, I cannot believe that these statistics give a true estimate of the mortality from this operation alone. I have seen it

performed on a patient over eighty years of age, on several over seventy, and on two patients in a very bad general condition, though not so old. In not one case was there evidence of severe shock, and all recovered from the operation. Beyond question, many of those on whom this operation was performed were *in extremis*, and their death should properly be attributed to their pre-existent condition, and not to the operation. Yet these cases are included in the statistics, and are used to prove the great mortality after this simple operation. I hope no surgeon will allow the influence of such statistics to prevent him giving the aid of his skill to the sadly afflicted victims of intravesical prostatic hypertrophy.

As showing the position the operation should hold, I quote the following from a paper by Buckston Brown, read before the London Medical Society, March, 1893:

"I would express my present opinion as follows:

"(1) Suprapubic prostatectomy should never be undertaken at the outset of catheter life, unless regular catheterism is impossible.

"(2) It should not be undertaken as long as ordinary catheter life is tolerable.

"(3) If, from any causes, catheter life becomes intolerable, suprapubic cystotomy should be resorted to. By means of this proceeding, the bladder can be thoroughly explored. The intravesical growth, if it is found to exist, and of its existence we can never be sure till the finger is in the bladder, can be fully examined and removed if the operator thinks right to do so. If he deems removal inadvisable, or if there is nothing which can be removed, he can leave the patient with a suprapubic tube for permanent after-wear, with the certainty that he will have materially improved the condition of the patient.

"(4) Should the operator decide to remove the prostatic obstruction, there is a very good prospect, but not a certainty, of the power of natural micturition being restored to the patient."

CASES. I will close this paper giving a few points in the following cases that were operated upon in the General Hospital in Guelph in the past two years:

(1) J.G., over sixty years of age. Twelve stones were removed in January, 1892, by the lateral operation. Finding that his bladder condition did not improve, he returned to the hospital the following May. He could not void his urine naturally. The catheter was difficult to pass, and always caused hemorrhage. The urine constantly showed the presence of blood and pus. On making a suprapubic opening, the prostate was found projecting into the bladder cavity on both sides of the urethral orifice. It was not a complete collar, having being split below in making the lateral section. Above, a part was also missing. The part on the right side

projected an inch and a half into the cavity of the bladder. By means of the finger and a small forceps, the whole of this intravesical growth was removed. This man wrote me a letter in May, 1894, two years after the operation, in which he says he has only to rise once during the night to void urine, and that he has not required a catheter for months.

(2) P.S., æt. 82, a patient under the care of Dr. Stewart, with whom I had the privilege to be associated in the operation. This man, also, had stone. The high operation was selected, in the belief that his symptoms arose in part, at least, from prostatic obstruction. After the removal of a considerable quantity of easily broken-down phosphatic calculous matter, the intravesical prostate was as freely removed as possible. Owing to its extreme hardness, it was very difficult to get away all that projected into the bladder. Notwithstanding his great age, this patient made an excellent recovery, and regained power to void his urine by natural effort. He is very well now, nearly two years after the operation.

(3) J.R., æt. 64. This patient's bladder symptoms began about ten years ago. Before operation he was compelled to pass urine ten or twelve times every night, with great pain and strangury. The urine was very foul, and always contained blood, pus, and a ropy slime. On opening the bladder, an enormous enlargement was found occupying the whole base. The bladder was sacculated, and its walls near the base presented patches of papilloma. Besides, they were non-distensible. The operation was performed in January last, and the suprapubic opening is still used for drainage, and must be as long as he lives. He eats and sleeps well, is free from pain, and has improved very much in his general health.

A NOTE ON THE THERAPEUTICS OF DIURETIN.*

BY ALEXANDER MCPHEDRAN, M.B.,
TORONTO.

THIS remedy consists of a combination of theobromine (49 per cent.) and sodium salicylate (38 per cent.), or, rather, is the salicylate of theobromine and sodium. Of therapeutic effects there is much diversity of opinion. According to some writers, it increases the blood pressure and causes diuresis, while others have failed to note either effect from its use. It is difficult to understand the cause of such differences of opinion, unless it be due to variation in the composition of the drug. My own experience with it has, on the whole, been fairly satisfactory, and in cases in which it has been useful the blood pressure has been raised, the pulse becoming stronger and steadier, and the flow of urine increased, as shown in the following cases:

CASE I. Dr. R., æt. 42, had arterio-capillary fibrosis. In 1891 he first sought advice for recurrent attacks of asthma, not suspecting that he was suffering from renal and vascular disease, the asthmatic attacks being, in fact, uremic. His heart was greatly hypertrophied, vessels hard, urine of low specific gravity, and contained one-sixth by volume of albumin. Nitro-glycerine relieved the asthmatic symptoms, but early in 1892 he became dropsical on account of cardiac failure. The urine, formerly copious, became scanty. Diuretin was given—20 grs. every four hours—and in two days he was passing over seven pints of urine, the heart became regular in action, and his general symptoms were much relieved. He resumed practice in about ten days, and was able to attend to it for over a month. Then the dropsy began to return. Diuretin was again taken, but with less marked effect this time. He improved slowly, however, and again attended to his professional duties, but only to break down sooner. Diuretin was tried again, but without material benefit. Some time afterwards it was given again, but the heart failed to respond to it, as it did also to digitalis. Death took place suddenly in September, 1892. The failure of diuretin here may, with reason, be attributed to the advanced degeneration of the heart, rendering it unable to respond to stimulus or tonic of any kind.

* Read before the Ontario Medical Association, Toronto, June 7th, 1894.

CASE 2. A. McC., æt. 45. This man also suffered from arterio-sclerosis, with very great enlargement of the heart, with consequent dropsy and much distress. I saw him, during 1891-92, on several occasions with his physician, Dr. Atherton. Diuretin acted equally promptly and satisfactorily in this case as in Case 1, the urine increasing to over eight pints in twenty-four hours, and dropsy disappearing. In time it again returned, and the subsequent use of diuretin proved unavailing to improve the heart or increase the urine. Digitalis was equally powerless. There was a history of syphilis in this case, and Dr. Atherton gave potassium iodide with the most satisfactory results. He spent the summer in fair comfort. Death took place late in the autumn of 1893.

CASE 3. J.B.S., æt. 75, I saw from time to time during the last two years, with Dr. Uzziel Ogden. He was a large, robust man, who had led a very active life. He first suffered from heart strain in 1891, caused by over-exertion. There were no signs of renal disease. Repeated attacks of failure occurred, each more marked, with dropsy, etc., than its predecessor. In August, 1893, his condition appeared to be almost hopeless, the heart being very weak and irregular, breathing very labored, urine scanty—all this notwithstanding the use of general and heart stimulants, purgatives, etc. Diuretin was ordered, and within forty-eight hours the urine became quite copious, the heart steadier, and the breathing easy. In a week he was comfortable, able to sleep lying down in bed, and move about his room. Later, he was out driving. He enjoyed his food, and was very comfortable. The heart continued steady, and the urine about 50 oz. Diuretin was stopped in a week, by which time the pulse had become regular, the dropsy had disappeared; that is, as soon as the indications for its use had been removed. About two months later the symptoms began to return again, but it had much less effect than during the previous attacks. Subsequently, as the heart grew decidedly weaker, it produced no appreciable effect on pulse or urine. Death occurred suddenly in March last.

CASE 4. Mrs. Y., æt. 70, has suffered for years from mitral incompetence with some degeneration, probably, of the cardiac muscle also. She has had several attacks angio-neurotic edema. Her sleep is greatly disturbed, and she often awakes in great distress from dyspnea, having to rise quickly to get her breath. There has been much dropsy, with scanty urine. Diuretin was given with much benefit for a time. Later, it gave much less relief, and the following modification of the pill triplex, or Guy's Hospital pill, was given:

R.—Pulv. digitalis.....grs. xxiv.

Hydrargyri submur.....grs. xij,

Ext. nuc. vomic.....grs. vj.

M. and div. in capsulæ.....xij.

Sig.—One to be taken three times a day.

This gave much relief, reducing the dropsy, increasing the urine, and rendering the heart fairly regular. This improvement will, of course, be only temporary.

CASE 5. J.D., an old man, lately in the Toronto General Hospital, with dilatation of the heart, chiefly of the right ventricle, due to chronic bronchitis and emphysema, was discharged in very good condition. There was dropsy, scanty, high-colored urine, orthopnea, rapid, weak, irregular pulse, and cough. At first he was purged fairly freely with mercurials, followed by salines to deplete the portal system, and thus relieve the over-distended right ventricle. Digitalis and strychnine were given as cardiac and general tonics. Considerable improvement resulted. Diuretin was then given \mathfrak{z} ij. per day, and the urine increased 10 oz. per day, becoming clear; the dropsy disappeared, and he was able to sleep comfortably in bed all night. Of course, the other remedies given did much to bring about this desired result.

These five cases are a fair indication of the results of my experience with this drug, and several of my friends have had similar results. On the other hand, others have been greatly disappointed in its use, the effect of its use being only slightly beneficial or wholly negative. The explanation of such a difference of experience is not very clear. It would seem probable that diuretin is effective only within a very narrow range of morbid condition; that when the heart has failed beyond a certain degree it will not respond to the stimulus of diuretin. This seems to be true, at all events, in my own cases, in all of which its use has been temporarily more or less effective, but only temporarily, as recurrence of the dropsy and cardiac failure was little, if at all, benefited by a repetition of the drug. Diuretin is, unfortunately, a patent remedy. Its composition is known, but the process of manufacture is secret. The salicylate of theobromine and sodium is composed of the same ingredients, but is much less agreeable to take, and its effect, so far as I have tried it, is not so satisfactory, possibly from its being less soluble. In some cases diuretin causes headache, nausea, and feeling of depression, probably due to the salicylic acid in its composition. Some of these symptoms presented themselves in Case 2.

In concluding this brief note, I may say that while diuretin is not a reliable remedy, yet I think that, in suitable cases, its beneficial effects are so decided as to render it worthy a trial in those distressing cases in which the heart is failing and dropsy increasing. Even if its good effects are only temporary, they are in some cases so satisfactory that the respite given amply repays its administration. Most drugs are temporary in their effects, and we do not refrain from their use on that account. It is probable it will be found most useful in chronic diseases of the heart muscle,

with disease of the kidney, as in arterio-capillary fibrosis ; less so in purely renal cases. It may sometimes prove useful also in valvular disease with ruptured compensation. In ascites from hepatic affections and in pleural effusions, it will probably have no effect.

Like all patented preparations, diuretin is unnecessarily expensive, about twice the price of the salicylate of theobromine and sodium. It is to be hoped that an equally useful preparation without the patent may soon be placed within our reach.

Selected Articles.

THE INFLUENCE OF MORGAGNI ON ANATOMICAL THOUGHT.*

BY RUDOLF VIRCHOW.

ALTHOUGH the history of medicine has always had a certain connection with the history of the general culture of mankind, it still offers a few remarkable peculiarities. In the first place, without a break in continuity for about twenty-five centuries—from the time of Hippocrates until now—the consciousness of this connection has never been lost. While religions have changed, and systems of law have superseded each other, medical traditions have still been preserved. The terminology of to-day, and even the barbarisms of youthful writers, try to preserve the appearance of Hellenistic origin. No other science has ever been in its origin so firmly grounded, and none of them is really so old, as that of medicine. The history of medicine, such a long continuance of the doctrine, would scarcely have been possible if there had not been an element of unity in the object with which it concerns itself, an element which outlasts all changes of time and place, and which presents the same problem of research to each succeeding generation—the problem of disease. Of course, particular diseases differ according to place or time, but the inquiry into the science of disease in general always remains the same; and the task of the physician—the preservation of health—does not cease, whether it be in Italy or Russia, America or Europe. At first sight nothing is so marked or confusing as the change of medical schools according to time and place. Certainly, until towards the Middle Ages, all the schools were to be found in one or other of the countries bordering the Mediterranean. The Asclepiades and their successor, Hippocrates, had taken their doctrines from the policlinic of the Temple of Cos and other pre-

*An address delivered at the eleventh International Medical Congress, held at Rome, March 30th, 1894.

Asiatic places, whence the new doctrines spread over the whole Grecian world more rapidly after the rise of the empire of Alexander the Great. The first Greek physician appeared in Rome in the time of Cicero. Galen brought the pathological doctrine of Hippocrates with him from Pergamos. But even then no change of doctrine took place. The humoral pathology of Galen did not pretend to be anything but a faithful exposition of Hippocratic teaching; although more than half a century separated the two men, posterity had accustomed itself to consider the two as contemporaries, nay, almost as manifestations of a single personality. Rome furnished no rivals during the century. The only classical author of the Latin race was so little original, and, what is still more marked, so little general, that he only acquired renown for his interpretation of portions of this doctrine. It was only in the eastern portion of the Roman Empire that the school preserved any activity; in Asia Minor, as well as in Byzantium, independent authors existed, who, however, owe their fame to the study of special branches of the system. Nevertheless, humoral pathology remained, and especially in the form which it had received from Galen, the acknowledged doctrine of the whole civilized world east and west. The four cardinal humors, the *chumoi* of the Greeks, were everywhere considered the foundation of physiological and pathological modes of study of the component parts of the human body, and of the changes they indicate during the course of disease. Every disease, according to that doctrine, appeared to be a change in the mixture of the juices in parts or in the whole of the body. It is, therefore, an idle question to ask how they arrived at this conception, and where the doctrine found its origin. The only other Mediterranean country which has left to us a more comprehensive medical literature, Egypt, offers us no sufficient basis for a possible explanation. As to other more remote lands, we only have some few works from India in which certainly links may be recognized, but they also differ considerably in various parts, and no intimate connection can be discovered between them. At all events, none of these countries has ever had a decisive influence on the progress of the doctrine of medicine. The first influence of this kind belongs to quite another time, and to quite another region. This influence also has been raised on the foundation of humoral pathology. When after the decline of Alexander's kingdom a series of independent kingdoms arose out of the ruins of his conquests, the seeds of medical science were preserved amongst peoples who, until then, had seemed to be quite without the pale of the interests of science. Smaller and more local centres formed themselves in Syria and Persia, and there arose continuously a line of noble physicians, who not only gained influence in their native homes, but spread this doctrine far and wide. This was the period when the Jews and Arabs distinguished them-

selves as amongst the most respected teachers of medicine. Quite lately, in our own time, have Hebrew manuscripts been brought to light which prove with what zeal and learning the Jewish physicians of the early Middle Ages preserved and furthered the science of medicine. The inherited capacity of the Jews, who since then have done so much for the advancement of science, was very apparent at this period. The Greek heroes might have fallen into oblivion had it not been for the Arabs, who held aloft the lamp of science; first in Mesopotamia and neighboring lands, then in North Africa, and especially in Spain, they founded schools which became the nurseries of science for the West. Here were read the Greek authors translated into Arabic, and interpreted in the light of progressive experience. The Arabs brought a new and influential element into medical thought, the doctrine of the Spirit, an element almost entirely foreign to the objective mind of the Hellenes, except in a similarity which I wish particularly to mention. In Hippocrates the idea is scarcely found at all, but among the shepherds and nomads of the East belief in supernatural powers had been preserved, no doubt, from prehistoric times. These, different from the natural powers of the material world, were effective partly outside the body in independent existence, and partly within it for a shorter or longer time. The "vital air" was considered as a prototype of this, and found expression in the Hellenic term *pneuma*, and in its inferior phenomena was called by the Latin translators "Halitus," and in its higher manifestations "Spiritus." Echoes of this thought has even in our time arrived at a position of some importance in the form of animal magnetism, spiritualism, and also to some extent in hypnotism. Among the Arabs all this lay in the region of speculative thought, such as a lonely brooder might evolve at his fireside. A kind of natural history background was gradually formed for him out of a second mode of observation, the chemical, by which the Arabs acquired such an important position in the history of natural science. It is well known that they were the creators of this form of investigation, which only at the end of the last century assumed its true position among the natural sciences. The Arabs themselves never got beyond alchemy, but in taking the first steps in analysis and synthesis, and by the methods of extraction, of distillation, sublimation, precipitation, and the procuring of pure metals and salts, confirmed still more the idea that finer matters were hidden in the raw substances, and these were, in their ideas, the real forces of nature which underlay the activity of the grosser matter. Thus the idea of spirit came gradually to be linked with the conception of a true reality, a refined embodiment of the effective forces, and in this kind of special vitalization this idealistic conception was imported into the western world, which even in prehistoric times held ideas that foreshadowed these. The contact of the western

with the eastern countries at the time of the Crusades contributed largely to ensure the entrance of such ideas into the minds of eastern peoples. Perhaps that would not have had much influence, but there then existed no western science at that time—at least, no medical science. The West received its scanty store of medical science directly from the learned schools of the Arabs, partly from Spain, and partly from North Africa. For Spain the principal point of contact was Southern France; for North Africa, Southern Italy. But, while the importance of Montpellier developed itself slowly and almost imperceptibly, the school of Salerno has remained the place where the breach was made through which the ideas penetrated which Constantine had imported from the East in the eleventh century. To this was soon added the monastery of Monte Cassino, and the transmission of this doctrine to the Benedictines, as well as later the acceptance of this doctrine in the monasteries. It is not surprising that the medical science of the monks should be the old humoral pathology. When it was seen that the medical science of the Arabs was found in the Greek authors people began to translate the Arab translations into Latin, and these revised translations very much later have been the foundation of the study of medicine, not only in Italy, but in the whole West. When Latin, since the time of Charlemagne, had become the speech of science, Hippocrates, and, in a greater degree, Galen, were acknowledged by the church, and they acquired by and by, although not through the express sanction of the church, the position of real fathers of the church, to doubt whose reliability would be considered a sacrilege. So that the doctrines of Galen, already venerable by age, became the absolute dogmas of the church. It would, perhaps, have happened differently if that kind of institution, in which modern medicine has found the real source of her knowledge, had then existed—I mean the hospitals (*Krankenhauser*); but the so-called hospices of the Middle Ages, especially of the early Middle Ages, were, indeed, mainly intended for pilgrims, and afforded a short rest to the traveller, whilst the priests who superintended them had rarely an opportunity to give assistance to sufferers. It is true that not a few of these old hospices, when they had existed a long time, became true hospitals. To-day we must recall that the first hospital known to us, built on the Tiber Bridge in Rome in the seventh century, had been founded for Anglo-Saxon pilgrims. This was the Hospital Spiritus in Sassia, in connection with which later, through Pope Innocence III., the organization of the hospitals of the Holy Spirit spread over the whole West. This hospital on the Tiber still stands in the old position, transformed into a large non-lay hospital. I have before now described the history of these hospitals, and explained how little they did in the way of affording true help to those in need of assistance and to medical science.

Those among them deserving of mention in the history of medicine owe it almost unexceptionally to the circumstance that they were finally superintended by laymen, and, as a rule, were in the hands of the civil authorities ; for only since the beginning of last century have the governments almost everywhere taken a share in this humanitarian task, especially since medical instruction in the universities categorically demanded the use of hospitals for this purpose.

For my present purpose hospitals have but little concern, for I wish to show this great assembly how the old and dogmatizing medicine regained its freedom, and became modern scientific medicine. This remarkable change was led up to by a long series of battles, that, for the most part, were fought out on Italian soil, although other nations contributed to this victorious result. The prize of this battle, or, more exactly, the prizes, have fallen to the science of anatomy. It is scarcely necessary to prove that throughout antiquity an opportunity was only once, and that during a short space of time, offered for anatomical researches on the human body. That was the time after the death of Alexander, when the government of Egypt fell into the hands of the Ptolemies. Afterwards a similar possibility was never again given to a physician of the ancient time. And so even Galen could recommend nothing better than to study animals which, in his opinion, were nearest to men—that is, apes and swine. As we can well understand, the sacrificial cult, which demanded the confirmation of the normal condition of animals and their organs, gave many an opportunity for comparative and even pathological observation. Even the usual sacrificial animals must often enough have given a thoughtful observer material for considerations and conclusions which were capable of being utilized for the determination of human pathological conditions ; and there can be no doubt that Hippocrates already knew and made use of many facts that have been confirmed centuries later. But it is evident that both anatomy and pathology must remain hypothetical so long as no examination of the human body could yield strict proof of the particular condition of individual parts. The real difficulty lay in the church. The natural dislike of the people to dissection of the human body was confirmed by ecclesiastical prohibition. To this was added that those who were convinced of Galen's infallibility had no need to dissect. Why undertake dissections if one knew the arrangement of the body? By means of this argument the singular dilemma was reached that hindered the development of anatomy for at least two centuries ; in order to prove that Galen had erred, dissections must be made. Science demanded this, but the church declared that it was quite certain that Galen had not made a mistake ; therefore it was not advisable to undertake such reprehensible action. Here only the highest ecclesiastical authority could come to the

rescue, and it finally decided in favor of science. In Rome itself there have never been wanting physicians who felt it their duty to forward the acknowledgment of truth in science, and not a few of the papal body physicians have belonged, down to our own times, to the most energetic advanced guard in this struggle. Thus it is explained how, from the beginning of the fourteenth century, Mondini in Bologna got permission to dissect human corpses and demonstrate upon them before students. When once the path was opened up, it became available for others. Thus the Italian universities gained a valuable extension of medical instruction at a time when it was still long lacking in most other universities, and thus there were anatomists in Italy when elsewhere such a line of study was not yet known. From that time there began a pilgrimage of students from northern lands to the Italian universities, particularly to Bologna and Padua, and sometimes there even arrived a man who had finished his studies, but wished to complete here his full culture. Among these was also the young *savant* whose fate it was, by his own systematic researches, to destroy forever the belief in Galen's infallibility, and then, at least in the anatomical field, to found, in an ineradicable manner, the rights of necropsy. This man was Andrea Vesalius, of a low German family, born in Belgium, educated in France, but who, when professor at Padua, arrived at the high position which enabled him to become the true reformer of the doctrine of the institutes of medicine, and, at the same time, to conquer for anatomy, for all time, the position of a true (*grundliche*) science. Vesalius was one of those rare men of universal importance so seldom found to appear in history; so that almost all civilized nations of the Europe of that day—Italy, France, Germany, the Netherlands, and even Spain—could look upon and reverence him as belonging to them, and the value of his victories in anatomy was acknowledged at the same time with respect to all other branches of medicine. Nevertheless, it is not quite correct to call him the reformer of medicine. His anatomy, as such, was not able to set aside humoral pathology. Nothing could prevent the idea that the organs of the body, even those whose position, connection, and arrangements were exactly known, were made up of four *humores*. To procure a change in this, it needed a direct front attack against the centre of the battle line of the dogmatists against the doctrine of *crasis*. This was accomplished with the violence of a conqueror by a German, who, in truth, despised anatomy, and used, instead of it, the Arabian tradition, but in a very changed form, as the means of his effectiveness. This man was Theophrastus Paracelsus, a contemporary of Vesalius. While proving the chemical impossibility of the four *humores*, and their acceptance as elementary matter, he succeeded, with the assistance of spiritistic additions, to build up a kind of anti-doctrine, which, mixed, half naturally, half

spiritually, unfortunately acquired in the hands of his successors a predominantly mystical character.

It is difficult to say what might have proceeded from this doctrine, which, although bared of dogma, was, on the other hand, a prey to the most wilful subjectivity. But salvation was near. Already at the beginning of the seventeenth century William Harvey founded the doctrine of the circulation of the blood, and thereby laid the foundation stone of a new study, which soon arose gloriously beside anatomy—that of physiology. He, too, had come as a young man to Padua, principally in order to improve himself in anatomy. Under the direction of Fabricius ab Acquapendente he studied the arrangement of the blood vessels and the heart, and so (instead of the blood as *one* of the four *humores cardinales*) he finally looked upon the blood as the “noblest humor,” the real *humor cardinalis*. His doctrine of the circulation left only one gap, but that was a sensible one. He could not prove how the blood reached the veins from the arteries. To have given this proof through direct observation is again the merit of an Italian investigator, the celebrated teacher of the University of Bologna, Malpighi, who applied the new invention of the microscope to the observation of the living body, and discovered the capillary circulation. In this way, to a certain degree, the crown was set on the building in the erection of which Vesalius and Harvey and innumerable other men of science employed their powers. Thereby also was confirmed the change of the humoral pathology into a hematopathology, and a line of research founded, to the furnishing and transformation of which the following two centuries labored, and which have not yet found their final close (ending). Strangely enough, none of the investigators above named arrived at the point of applying the results given by pure anatomy and its development into an experimental physiology to pathology; but no one can continuously occupy himself with anatomy without becoming attentive to the changes caused in the living body by disease. Indeed, we know that from Eustachio to Vesalius the pathologico-anatomical differences have occupied attention; but neither they nor their immediate successors have noticed these differences with such accuracy that the foundation of a practical doctrine of disease could proceed therefrom. On the contrary, the old idea that disease was something general became all the stronger the more the conviction that a single liquid streamed through the whole body and was the centre of all essential changes became fixed. Even the comprehensive studies of the great Leyden teacher, Herrmann Boerhaave, could not break down that conviction. It had only the result of removing the importance of local processes into the sphere of the interests of physicians; but it finally culminated in the referring of their local processes to the circulation. Therefore the

circulation always remained in the foreground of pathological observation, and Paracelsus' idea of the *vita propria* of the organs was set aside as a spiritualistic error. It was in this time that the fresh development due to Morgagni occurred. His good star first led him into surroundings which were less favorable to pathological than to anatomical study. Let us dwell on this for a short time. When Giovanni Battista Morgagni, in 1698, at the age of scarcely sixteen years, left the school of his native place, Forlì, and went to the Bologna University, he found himself, so to say, placed in an anatomical atmosphere.

Everybody still remembered the discoveries which had been made by Malpighi, Aranzi, and Varoli. Morgagni first became closely connected with Valsalva, who made him share directly in his anatomical work, and also introduced him to pathology and medical practice. In 1701 he received his diploma in medicine and philosophy, and a few years later the presidentship of the *Academia Inquetorum*, from which later on proceeded the *Istituto delle Scienze*. In 1706 there appeared his first independent production, the "*Adversaria Anatomica Prima*," which was gradually followed by further pamphlets. His fame grew so rapidly that the Venetian Republic called him to a chair in Padua in 1711, which had before been occupied by Vesalius. There was then developed such an extensive scientific activity that the number of students could not be accommodated in the narrow space of his lecture room. I may venture, I hope, in spite of the international character of this Congress, to remind my hearers how large a share Germany had in this frequency, and how was developed a particular relation of our countrymen to the great master. As early as the year 1715 Malpighi was chosen by his German students as *patronus Germanorum*. With his help they erected a special house with a library, which bore the inscription: "*Inclita natio Germanica adjuvante liberalissimo protectore Cel. viro Io. Bapt. Morgagni M.P.L.P. has sibi emit sedes.*" But even seven years earlier, in 1708, he had received from Germany the first great foreign distinction which he ever obtained: the *Academia Curiosum Naturæ*—from which later on the *Academia Cæsarea Car. Leopold Cur. Nat.* was developed—elected him as member, and in 1732 as adjunct. How much Morgagni felt bound by these honors he has himself repeatedly proved, especially when, at about eighty years of age, he published the first book of his great work, "*De Sedibus et Causis Morborum.*" It is dedicated to Trew, the well-known member of the above-named academy; and he showed the same gratitude (in the last book) to the Berlin Academy of Sciences, which, on the proposal of Johann Friedrich Meckel (to whom the fifth book is dedicated), nominated him member. The method of research, such as practised in Italy by Valsalva and Morgagni, was, in fact, the same used by the best physicians

in Germany, in the first place by the members of the Academy of Naturalists, who had already published the first natural history medical review—the “*Ephemerides Naturæ Curiosum*.” When one turns over the leaves of Morgagni’s five books how often does one find quotations from that review, and how gratefully does the otherwise keen critic speak of those observers? Certainly, it was not only yesterday that German physicians and naturalists visited Padua and Bologna with a kind of preference, and Italians will not take it amiss that we, when we cross the Brenner on the old imperial road, renew in those towns the memory of old *camaraderie* on the battlefield of science. Vesalius and Morgagni were the geniuses whose images always rise before us, whose fame has outlasted all the warlike deeds of later times, and at whose call we renew the old bonds. These bonds have nothing offensive to other nations. For Morgagni does not belong only to Italy, and still less to Germany; though he was not, like Vesalius, a citizen of several states, he still became in quite as great a measure the representative of science common to all peoples. To recall to memory his relations to Germany seemed to me a duty of gratitude for all that we have received from him; but I gladly acknowledge that a still higher duty of gratitude enjoins us all, who are assembled here to offer to his spirit a tribute of acknowledgment for all that he has done for science. But who can briefly express what he has done for science?

When Giovanni Battista Morgagni, at the age of eighty-nine, closed his eyes forever on December 6th, 1771, he left to the world, as the outcome of the work of such a long life so early dedicated to science, the five books, “*De Sedibus et Causis Morborum*.” The new study which was thereby called into life was not then yet named with the name which it afterwards received—pathological anatomy; but every one already knew that these books contained the sum of all practical knowledge of the material changes of disease which till then had been gained. The recent observations of Valsalva, and the yet more numerous ones of Morgagni himself, were here united with all the innumerable experiences which were scattered through the academical and periodical publications of all western countries. Morgagni had collected them with anxious fidelity. Unlike the frequently uncritical and unreliable collections and *sepulcreta* of earlier times, every single observation was here controlled by reference to its sources; and then exactly criticized, not only in order to fix the anatomical facts, but also to expound the relations of the same to clinical processes, and to form conclusions with regard to diagnosis and prognosis. It was by no means a mere work of collection and reference, like those of his predecessors—Schenk von Grafenberg and Bonet; it was rather a methodological guide; and, on the other hand, the aim of the book was not only the furtherance of anatomy as a pure science, but in almost a greater degree the develop-

ment of the same into a fundamental science of practical medicine. So it is to be understood that the clinic did not attain its true importance until after Morgagni's time, and therefore we can say that, first with and through Morgagni, the dogmatism of the old schools was completely broken, and that *with him begins modern medicine*. But I have another observation to make. When I said that the work, "De Sedibus et Causis Morborum," was also, from the methodological point of view, to be considered a pattern guide, I did not mean it alone of the method of actual observation and the *épicrise* of single cases, but also of the method of the scientific treatment of the doctrine of disease in general. Wherein does this method of Morgagni differ most from that of his predecessors? and in what consists its special merit? It seems to me that neither the historian of medicine nor the representatives of special departments of study have done full justice to the genius of the great Forlisan. Till Morgagni the general or casuistical contemplation of disease or of the patient stood for every one before the considerations as to the nature of the disease, or, as one rather said, as to the essence of the disease. The processes were examined, the symptoms fixed, the changes in the body were attempted to be discussed, all was collected into one picture of disease, and a name was given to it. If, as was often the case, the real nature or essence of disease was not ascertained, it was attempted to clear up the matter in a constructive way, and formulate the result. Then anatomical, or clinical, or etiological points of view became decisive, and yet these names of disease (chosen from such different points of view) were treated as co-ordinated denominations. If one did not succeed with the local phenomena one helped oneself out with a hypothesis, whereby the most wild hypotheses were accepted as reliable—nay, even as scientific. What has not happened with fever and with inflammation? Is there an essential fever? Is inflammation an *einheitliche* idea? How different do the answers sound that have been received during the course of time to these questions! Morgagni, who observed diseases as an anatomist, did not consider the question of their essence as the first object of research. The title of his great work begins with the words, *De sedibus morborum*. Indeed, this is justified by the series of observations which the physician in general and the pathological anatomist in particular has to undertake. I am accustomed to condense all that for my students in the question, *Ubi est morbus?* Where is the disease? And therewith the scientific method of examination and the preassumption of the local process are predicated; for it is evident that such a question would be absurd if real general disease existed. To discuss the question of disease before such a learned assembly would seem to be an anachronism. Should any one of those present still preserve in a hidden fold of his brain the memory of general

diseases, he will, on consideration, find that in every sick man there still exists a part, and, as a rule, a predominating part, of healthy life, and that the disease or even dead part forms only one portion of the body. Whoever does not understand this cannot be spoken to at all about pathology in the sense of a natural science. Pathological anatomy has been called upon to demonstrate this conviction *ad oculus*: there is no sick body that is changed in every one of its parts. This is the meaning of the words "*sedes morbi*" which Morgagni puts at the head as the quintessence of his experiences. But pathological anatomy is not in a position to prove the seat of every disease. In the great sphere of nerve disease, and even in that of poisonings, there exist innumerable cases in which anatomical observation is insufficient, not because there is thereby no *sedes morbi*, but because the disease has produced no visible changes in the parts attacked; but anatomy has only to do with visible things. Therefore, the pathologico-anatomical *Befund* (finding) is not covered by the idea of the seat of the disease; on the contrary, we hold ourselves justified on the ground of our physiological and chemical knowledge to speak of the seat of the disease even where we do not discover any visible change.

This it is that I call *the anatomical idea in medicine*. I affirm that no physician can properly think out a process of disease unless he is able to fix for it a place in the body. *Ubi est morbus?* is the question with which not only the examination of a living patient must begin, but also that of a dead body; but when this examination does not give a practical result the examination is not therewith at an end, but rather the new task commences, to gather from the whole of the clinical history, and particularly from the etiological facts, where the seat of the disease must be accepted as existing. The anatomical thought, according to this, extends far beyond the pathologico-anatomical sphere. It is no longer bound to the visible changes which the knife of the anatomist lays open to observation; it is rather connected with *vital function*, and comprehends a large portion of what the modern division of labor points out to the clinician. In Morgagni's time this division of labor was not yet completed, and, though he was more of an anatomist than a clinician, still many a division of his great work belongs principally to the clinical sphere. This explains why so great a number of his successors belonged to the clinical schools, and why he had such a decisive influence on the methods of research. Nothing is more characteristic in this connection than the fact that the Parisian school of Bayle and Bichat, of Laennec and Dupuytren, is directly recognized as the school of "organicism."

Since then we have far outstripped the aim of that school. The research into the *sedes morbi* has progressed from the organs to the tissue, and from the tissues to the cells. But, at the same time, practical medi-

cine has ever more extended the principle of local treatment, and, to an extent till recently unforeseen, has applied it to the innermost parts of the body, which, till now, were regarded as absolutely unapproachable. Pharmacology as well as surgery have become every year more localized; so much so that the old Morgagni, if he could stand among us once more, would be probably horrified at conduct that so much contradicts the old tradition—that modern medicine has, in fact, very little resemblance to the science of Galen. And yet we might succeed in gaining absolution from Morgagni by convincing him that it is his *own* idea which celebrates such triumphs—an idea that he himself did not work out to perfect clearness, and the last consequences of which he did not draw, but which first flowed in full strength from his works—the idea of the *sedes morborum*, or, as I have called it, the anatomical idea. It is this idea which now governs all physiologists and pathologists. Whether one traces it with me back to early times or searches for another formulation for it, it will certainly become the idea of the future. And this future will place the date of its origin—its yesterday—in the days of Morgagni. To him be the honor.—*The Lancet.*

Clinical Notes.

PYEMIC INFECTION OF THE BASE OF THE BRAIN, SECONDARY TO DEEP ABSCESS OF THE NECK.*

BY WM. OLDRIGHT, M.A., M.D.,

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THE patient, C. F., æt. 58, a manufacturing stationer, sent for me on the 18th December. A few days previously he had been exposed to a current of air between two open doors in his warehouse. On examination I found that there was much pain in the region of the left temporo-maxillary articulation, with inability to open the mouth. Pulse and temperature were normal. I ordered him two grains of hydrarg. submur., to be followed by a seidlitz powder, and after free evacuation to have salicylate of soda and quinine in antiperiodic doses, with small doses of morph. mur. The next day I received a telephone message that he was much better, and had gone to business.

I heard nothing more of him until nearly midnight on the 5th January. I was then informed that there had been a return of the pain and stiffness of the jaw a few days after I had seen him, and that on the 25th of December he had resolved to try homeopathy, and had continued to do so until the afternoon of the 5th of January. I found him suffering from great pain and distress; the neck was greatly swollen from the lobe of the ear down to the thyroid cartilage. There being distinct fluctuation, I incised opposite the lower angle of the jaw, and took away a saucerful of extremely offensive pus. Although much relieved and obtaining sleep for the remainder of the night, he had some delirium when awakening. His temperature was 103° F., when seen in the morning. Assisted by Dr. H. H. Oldright, who applied ethyl-chloride spray, I made a counter opening close to the *pomum Adami*, washed out the sinuses with a solution of hydrarg. bichloride 1 in 2,000, and passed through a drainage tube.

On the following day, finding that bogginess and fluctuation were still persistent behind the sterno-cleido-mastoid muscle, I passed a long probe across

* Read before the Toronto Pathological Society.

to that region from the lower end of the incisions already made, and gave another outlet in that direction. I also found bare bone at the angle of the jaw, and that a sinus ran behind it into the deep tissues. In this I kept a small drainage tube. Later, I found that this sinus also connected with another running on the inner side of the body of the jaw parallel to the external one first drained, and discharging by the same external opening. The discharge from these various sinuses was extremely offensive for several days, and contained shreds of sphacelated fascia and other tissues.

The patient became easier and able to swallow, but there was a good deal of deep-seated pain, delirium when half awake, and photophobia. Dr. R. A. Reeve saw him with me on the 10th; found no disease of the eardrum, middle ear, or mastoid; from the retinae we could gain no information, owing to the existence of cataract in both eyes.

The obscure cerebral symptoms persisting, Dr. J. E. Graham saw the patient with me on the 12th. The condition at this time and for ten days afterwards was one of semi-stupor, with alternate intervals of restlessness, muttering in sleep, and fright and delirium on awaking, but answering rationally when thoroughly awake, and for some days pronouncing himself better when interrogated. Photophobia persisted.

In the latter part of the following week he was seen two or three times by Drs. Graham and Strange. An edematous swelling, with pitting and redness of the skin, occurred above the right ear, and extended a short distance behind and in front of its upper portion. There was also much tenderness on the right side of the neck, especially about the situation of the facial vein and the region beneath and posterior to it. Exploration down to the temporal bone was made on two or three occasions, a hypodermic needle being employed. The results were negative, and we did not consider ourselves justified, in the weak condition of the patient, in making random explorations of a more heroic and hazardous nature. The cerebral symptoms became more and more aggravated, the patient trying to get out of bed, and shouting in a condition of semi-consciousness. Death ensued at 1.50 a.m. of the 27th.

The *post-mortem* examination was made some fourteen hours later. The sinuses already described, in the left submaxillary region, were opened. The scalp was now reflected, and the skull cap removed. Pus was found along the line of the middle meningeal vein, and, on removing the brain, pus was found in large amount in the circular and cavernous sinuses, and over the upper and anterior surface of the sphenoid bone. I removed the body of the sphenoid, and found it bathed and soaked in most offensive pus. I divided it vertically and horizontally; the odor from all the cut surfaces was most offensive, but I discovered no pus cavities in it.

On making the incision through the right temporal muscle for the purpose of removing the skull cap, I discovered pus which had evidently been working its way upward from the zygomatic fossa. This collection extended along the inferior surface of the base of the skull, almost to the middle line.

The course of the infective process seems to me to have been upwards from the collection in the deep tissues internal and posterior to the angle and ramus of the jaw on the left side, following the course of the vessels through the base of the skull, along the cavernous groove, then infecting the circular sinus, and across to the right cavernous sinus; thence extending out through the base of the skull by the communicating branches, and thus infecting the whole pterygoid plexus, and giving rise to the collection of pus described in this region. The free intercommunication will account for the great tenderness in the course of the facial vein.

It is probable that the infection of the middle meningeal vein was the latest, and would take place by extension through the internal maxillary vein. Would this later extension account, in part, for the more active and painful delirium towards the termination of the case?

A CASE OF CARCINOMA CORDIS, WITH SOME NOTES ON TUMORS OF THE HEART.*

BY HIBBERT HILL, M.B.,
TORONTO.

THE literature of tumors of the heart, as represented by the list of published articles compiled under the direction of the Surgeon-General of the United States, begins in 1819. About fifty of these articles treat of carcinomata, twelve of various cysts, ten of fibrous tumors, three of sarcomata, three of myxomata, two of polypi, and one each of lymphadenoma, angioma, tubercle, and lipoma. The first case of cancer was reported by Andral and Bayle in 1824. In 1846, Dr. Walshe knew of twenty-five cases. In 1877, Reynolds had collected records of forty-five cases. I have been unable to find any record of the number reported up to date. Hektoen, of Chicago, states that about one hundred and ten cases of tumor of the heart were recorded in 1892. However, such statistics are of little value in estimating the actual number of times that cancer deposits occur in the heart, since the condition has always been overlooked *ante mortem* so far; and judging from the cases reported, especially from the present one, there may often be small nodules which are overlooked *post mortem*.

Fibrous tumors of the heart are not very uncommon. Luschka reports one in a boy of six, situated in the left ventricle, the size of a hen's egg. Albers reports a second in the anterior wall of the left ventricle, as large as a pigeon's egg. A third has been described as growing from the auricular septum, and hanging downward through the tricuspid valve. It is possible that some of the scirrhus cancers formerly described were really fibromata.

Of all tumors of the heart, primary cancer is one of the rarest. Secondary cancer, on the other hand, is the most common. Primary cancer is generally colloid or melanotic. Secondary cancer is generally encephaloid. Structurally, epithelioma, by which is meant an epithelial new growth retaining the characteristic arrangement of the epithelium of the part from which it sprang, is the rarest form.

*Read before the Toronto Pathological Society.

Apart from primary growths, and growths by direct extension from immediately adjacent parts, the local infection must take place by the blood vascular system. The lymphatic system of the heart consists of sub-epicardial and sub-endocardial ramifications, which follow the course of the coronary vessels, those of the right side terminating in the right lymphatic duct, those of the left side in the thoracic duct. Without admitting reflux currents in the lymphatic system, it is impossible to account for infection of the heart otherwise than through the blood vessels. Such infection has occurred from primary growths in the eye, cheek, and bones of the face, lower lip, breast and axillary glands, ribs and pleura, abdominal organs, inguinal glands, uterus, vagina, labia, penis, testis, and upper and lower extremities. It is worth noting that in all cases the infective material, whether living epithelial cell or living protozoan, must pass through the lung tissue to reach the heart. That this occurs at all is due to the large size of the pulmonary capillaries.

Cancer of the heart, since it is nearly always secondary, occurs at the age at which primary cancers are most frequent. Hence, it is commonly found after middle life, although cases have occurred at the ages of twenty-five years, eighteen years, and in a child or three days. Males are more frequently affected than females. As regards heredity, at least two cases are recorded as occurring in the sons of men who had died of this disease.

The clinical symptoms are not pathognomonic. No case has yet been diagnosed *ante mortem*. In one case, where the pericardium was infiltrated and thickened as much as an inch in some places, the heart had been regarded as normal in position and sounds. Flint diagnosed only chronic pericarditis, with effusion, in a case where the heart was involved in a great cancerous mass. Eccentric pressure symptoms, especially if the aorta be thrust upward, a slow course, frequency of hemoptysis, and pleural and pulmonary inflammations, are given as distinguishing points from aneurism. It will readily be seen that a diagnosis based upon such points would nearly always be absolutely worthless. It may be concluded that it is next to impossible to diagnose large growths with certainty. Small growths will invariably escape recognition.

The gross anatomy of cancer of the heart varies in different specimens. Simple infiltration has occurred in one reported case so extensive that but a twelfth of the original heart substance was free from the growth. Multiple nodules scattered throughout the muscular walls have been found. Dupuytren recorded more than six hundred as occurring in one case. Large masses may occur alone, or, as in Hektoen's recently described specimens, accompanied by smaller nodules. The right side of the heart is more frequently affected than the left. The nodules often occur in the course of the

coronary arteries. Occasionally, the growth is pediculated, as in a specimen in the St. Thomas' Hospital museum. The nodule is described as medullary structure. It lies in the left auricle, attached to the auricular wall by a slight membrane. Such a foreign body might easily obstruct valvular action.

The pathological changes produced by the growth differ with its size and situation. Apart from the effects of the pressure exercised by a large nodule, and the rigidity of the heart wall caused by an extensive infiltration of its substance, pericarditis is the most common result of epicardial deposits, interference with the valves of endocardial deposits. Ulceration and softening are rare. One case of hemorrhage into the pericardium has, however, occurred as a result of erosion of the anterior coronary artery, which was involved in a nodule.

The case which I have the honor to report is an example of the commonest variety of carcinoma cordis, and, therefore, of tumors of the heart generally. I submit extracts from the *post-mortem* report, together with microscopic sections from the heart, from the sigmoid, and liver.

Post-mortem notes. Male, æt., apparently, 35. Died in April, 1893. *Post-mortem* by Dr. John Caven. History of cancer of rectum. Inspection: Short, small, emaciated. Edema of left ankle. Ulceration about anus. Colotomy wound in left lumbar region posteriorly. Section: Bladder and rectum infiltrated with cancer, and intimately adherent. Walls of sigmoid show subperitoneal nodules. Abdominal glands infiltrated. Right kidney shows extensive cortical deposit in the form of single and aggregated rods radiating towards the capsule. Left kidney shows fewer rods, not aggregated. Liver contains small nodules, from the size of a pin's head to that of a large pea. Lungs emphysematous. Heart shows extensive brown atrophy and small white nodules, pin's-head size, in the substance of both ventricular walls, and under the epicardium and endocardium of the right ventricle.

Of the clinical history the only interesting points are the recognition of the rectal growth, the colotomy done to relieve the stricture resulting from it, and the absence of any cardiac symptoms, which might not be readily explained by the patient's exhausted condition.

SPECIMENS.

No. 1. *Cancerous nodules in sigmoid.* The chief part of the new growth is situated between the outer muscular coat and the peritoneum. Some smaller nodules lie in the inner circular muscular coat, and still others between this coat and the *muscularis mucosæ*. The arrangement of the epithelium is not that of a typical epithelioma, since the cells, although occurring in columns, are not cylindrical, nor have these columns any lumen.

No. 2. *Cancer nodule in liver.* The growth is situated between the capsule of the liver and the liver substance. Its increase in size has failed to break through the capsule, which can be traced across the specimen. As the growth enlarged, it compressed the liver cells, which are much flattened, especially at the point most remote from the free surface. In places the epithelial cells are cylindrical, and are arranged about a central lumen.

No. 3. *Cancer in muscle of heart.* The growth is spindle-shaped, lying between the bundles of muscle fibres which have been thrust apart by its development. Very little stroma can be made out. The cells are large, polygonal, and have well-stained nuclei. Many of them appear to have undergone degeneration. Very little infiltration of the tissue is found. The muscle fibres adjacent to the growth show distinctly brown atrophy, as do the fibres in other parts of the field.

No. 4. *Cancer under the endocardium.* The nodule is readily distinguished with the naked eye, situated upon a musculus papillaris which has been cut across. It is roughly oval in outline. The endocardium may be traced over its projecting surface, and is intact, although greatly thinned at the most prominent point. The cells are arranged in columns lying in a fairly abundant stroma. Inflammatory infiltration is not marked.

No. 5. *Cancerous nodule under the epicardium.* The growth appears to have begun at a point below the epicardial fat, between the epicardium and the muscle. It has extended both ways, compressing the loose areolar tissue of the fatty epicardium, and forcing the muscular fibres downward to form a hollow nest. The fibrous stroma is here well marked. The inflammatory infiltration is again conspicuous by its absence.

It appears evident that the growths in the heart were of recent origin. Their small size and the absence of inflammatory reaction is thus readily explained.

Other specimens were examined from the diaphragm and the pleura, all of which were cancerous. There can be no doubt that the new growth in the heart was a secondary cancer, originating in the rectum. The fact of its encephaloid structure is not against this, since it is well known that the cylinder-celled epithelioma of rectal cancer may give rise to encephaloid growths in the internal organs.

The suggestion has been made that the rarity of alveolar arrangement in cancer of the heart, and the absence in this case especially, where the original growth was one noted for its likeness to an alveolated gland, are explained by the fact of the constant motion of the heart fibres, tending to prevent any definite form of development.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

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THE TREATMENT OF TYPHOID FEVER.

Dr. Osler, of Baltimore, in discussing the treatment of typhoid fever at a recent meeting of the Clinical Society of Maryland, said :

He thought that the antipyretic drugs were entirely superfluous in this disease. The cold bath is more efficacious, but is not always available in private practice ; but all the good effects of the bath can be obtained by sponging. A good nurse or doctor can sponge the patient so effectually that the fever will be satisfactorily reduced. When the temperature is high, ice sponging—not with ice water, but with lumps of ice—over the back and legs will reduce the temperature very pleasantly to the patient, and satisfactorily to the doctor. Delirium and stupor are also effectively treated by ice sponging. The use of modern antipyretics in typhoid fever is, in nine cases out of ten, positively hurtful. They reduce the heart's action, and cause weakening sweats, and their use is an unmitigated evil. In the great majority of cases the treatment may be taken from old Dr. Nathan Smith, of Yale, which was pretty much that of to-day : Plenty of fresh air, liquid diet, and cold externally. He was in the habit of turning out the friends of the patient, putting the patient on the floor, and then dashing water, handed through the window by an assistant, over the patient.

RATIONAL THERAPEUTICS.

Dr. P. H. Pye-Smith, in *The Practitioner*, concludes a very readable paper with the statement that the list of specific remedies, mercury,

quinine, ipecacuanha, iron, arsenic, and salicyl compounds, is not a large one. He would urge the importance of (1) first giving fair play to direct and simple remedies. (2) Testing the efficiency of physiological remedies ; to make sure that potassium acetate, or broom or resin of copaiba, does increase the amount of urine passed, and not give them with the vague notion that they do good in dropsy. (3) Using our true specifics, which are well tried and certain, thoroughly with confidence and perseverance, pushing the doses until we get some evidence of their physiological action. (4) Mixing our purgative, diuretic, and other physiological drugs, but always giving our specifics each by itself. Lastly, he would urge the uselessness of many and much-advertised new drugs, for which are claimed wonderful specific or physiological powers on the slightest possible grounds. It takes a lifetime to know how best to use opium, digitalis, and other trustworthy drugs.—*American Journal of the Medical Sciences.*

OBSTETRICS

IN CHARGE OF

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THE DANGER OF INTRA-UTERINE INJECTIONS OF GLYCERIN FOR THE PRODUCTION OF ABORTION.

Pfannenstiel, in the *Centralblatt für Gynakologie*, 1894, No. 4, relates his experiences with intra-uterine injections of glycerin for the production of premature labor. He states that when this procedure was first published he admired its boldness, and concluded that the dangers of it were but occasional. His later experience in two cases, the histories of which he gives, has led him to a change of opinion regarding the above method. In the first case, labor was induced on account of advanced albuminuria, after the usual therapeutic means had been tried. Following consultation with his colleague, Wilke, the author, under all aseptic precautions, injected 100 cms. of chemically pure glycerin between the fetal membranes and uterine wall. In a short time the patient showed symptoms of profound collapse, which, notwithstanding all means of restoration, ended fatally in a few hours, the patient dying undelivered. The autopsy showed death to have been due to nephritis.

In the second case, induction of labor had been attempted by bougies four weeks before term on account of rhachitic pelvis combined with stenosis of the os uteri and cervix. The bougies not having the desired result, after consultation 100 cms. of concentrated glycerin were injected. One hour afterward the patient suddenly became cyanotic, and the temperature, which had been 39° , fell to 37° C., rising again to normal.

The urine drawn off by catheter an hour after injection showed blood, albumin, and casts, and spectroscopic examination demonstrated methemoglobin with hemoglobin. In twenty-four hours these abnormal constituents gradually disappeared. The glycerin failed to excite uterine contractions, but a small living child was delivered later by other means. The mother recovered.

The author believes the glycerin, in the above cases, caused decomposition of the blood, and he agrees with Afanassiew, who found that, in dogs, glycerin produced hemoglobinuria, glomerulo-nephritis, and even interstitial nephritis. Although, in the first case, nephritis undoubtedly existed, it is his opinion that the glycerin injection hastened the fatal termination.—*American Journal of the Medical Sciences.*

THE INFLUENCE OF CORNUTIN AND ERGOTIN UPON THE
COURSE OF LABOR.

Krohl (*Archiv. fur Gynakologie*, Band xlv., Heft 1) discusses at length the effects of preparations of ergot upon the uterus during and after labor. He finds that the uterus is favorably influenced by both ergotin and cornutin, but particularly the latter, the diminution in the size of the uterus caused by these agents being most noticeable in the first three days of the puerperal period. In labors, when ergotin or cornutin has been employed, there is apt to occur an expulsion of clots of coagulated blood at an earlier period than when no medicament has been used, and it has also been found that the internal os uteri closes much sooner, this rapid closure being particularly noticeable after the exhibition of cornutin.

The lochia alba is found to appear sooner when cornutin is used than without this means. The pulse undergoes some slowing during the administration of ergotin and cornutin, but no temperature change was noticed, nor was the secretion of milk influenced in any way. These agents distinctly favor uterine involution, and diminish considerably the congestion of that organ following labor; besides this, they prevent the collection of great masses of blood in the puerperal uterus, thus preventing decomposition.

As the whole inner surface of the uterus after birth presents a great irregular wound, these remedies by compression prevent the absorption of wound secretions through the lymph spaces. The author does not recommend the employment of ergot in substance, because of its uncertainty of action, but holds in high regard cornutin, or cornutin containing ergotin. Of these preparations, Bombel's ergotin is particularly to be commended, although he fears the very considerable cost will prevent the extensive use of this preparation.

In concluding his article, the author sums up the indications and contraindications for the use of ergotin as follows:

It is indicated:

(1) In all obstetric operations, and especially shortly before Cæsarean section.

(2) In atony of the uterus.

(3) After manual deliverance of the placenta, and after abortion and macerated fetus.

(4) In cases of twin labor, when atony of the uterus is threatened in consequence of the sudden evacuation of the over-distended uterus.

(5) In the puerperal period, in subinvolution of the uterus, and in recurring sanguineous lochia.

(6) In puerperal endometritis combined with vaginal inflammation, and particularly after vaginal irrigation.

It is contraindicated in :

(1) Hemorrhage during pregnancy.

(2) In cases of weak pains in the period of dilatation and expulsion. It is particularly contraindicated in the latter when combined with contracted pelves. In cases of tumors filling the small pelves or the soft parts of the birth canal. In tetanus uteri, and when stricture of the os uteri exists.—*American Journal of the Medical Sciences.*

THE VAGINAL SECRETION OF PREGNANT WOMEN.

Konig (*Centralblatt für Gynäkologie*, 1894, No. 1), after reference to the investigations of Doderlein, Winter, Steffek, and others, who claimed to have found pathogenic micrococci, particularly the staphylococcus albus and aureus, as well as other pus-producing microbes, in the vaginal secretion of women after labor, relates the results of his own experience in one hundred cases of women aseptic at the period of labor. He claims to have found in the lochia the streptococcus most frequently, and but seldom the staphylococcus aureus, and never the staphylococcus albus. After considering minutely the reaction of the vaginal secretion, which in three hundred pregnant women he found to be distinctly acid, he concludes that in pathological conditions the secretions attain a much higher degree of acidity, so that the streptococcus pyogenes can hardly thrive therein ; at least he was unable to obtain cultures of this germ. The author further concludes that the vaginal secretion of every untouched pregnant woman contains nothing pathogenic, the thrush or gonococcus germ excepted. Both are bacteria which upon the usual media of culture are aerobic at the body temperature. The vagina of every untouched pregnant patient is therefore aseptic.

Vaginal injections of antiseptics he considers dangerous in the ordinary patient, as they may chemically lessen the resistance of the tissues to bacteria, and may increase the intensity of septic endometritis by washing bacteria into the uterine cavity.—*American Journal of Obstetrics.*

GYNECOLOGY

IN CHARGE OF

JAMES F. W. ROSS, M.D. Tor.,

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LIGATION OF THE BASE OF THE BROAD LIGAMENTS PER VAGINAM, INCLUDING THE UTERINE ARTERIES, FOR FIBROIDS OF THE UTERUS.

Dr. Augustin H. Goelet, of New York, in a contribution to the *American Medico-Surgical Bulletin*, June 1st, reports favorably upon this operation in his hands for the control of uterine hemorrhage and reduction of fibroid growths. He believes it should be done in lieu of hysterectomy when that operation would involve too great a risk, and as a preliminary step, with a view of avoiding the necessity of the more hazardous operation. When extensive attachments have not been formed which would afford additional nutrition, considerable reduction has resulted even in growths of large size. When the operation has been done for smaller growths, the result has been more satisfactory. In some instances complete atrophy has been reported. This result, as well as the arrest of the uterine hemorrhage, is accounted for by the diminished nutrition furnished the uterus and these growths by the interference with the blood supply and nerve supply which are included by ligation of the base of the broad ligaments. It is estimated that the uterine arteries furnish the uterus with two-thirds of its blood supply, and it is reasonable to expect that a profound effect will be produced upon that organ and growths arising from the walls if this is suddenly cut off.

The sole danger in the operation is the risk of including the ureters in the ligatures, as they pass down behind the uterine arteries only half an inch from the cervix, and are, consequently, in the field of operation. Dr. Goelet suggests, as a preliminary step, to eliminate this risk, that bougies be passed into the ureters through the bladder. He admits, however, that a careful operator, accustomed to working in this region, may easily avoid the ureters.

The technique of the operation, as described by Dr. Goelet, shows an important departure from the usual method followed. Instead of ligating each artery in only one place on a level with the internal os, he applies a second, and often a third, ligature to the artery on each side as it ascends along the side of the uterus, the result of which is to cut off the compensating blood supply from ovarian artery to the lower part of the uterus.

Dr. Goelet gives all the credit of priority to Dr. Martin, of Chicago, who has recently suggested and popularized the operation and perfected its technique, but states that he first ligated the uterine artery, *per vaginam*, on one side in January, 1889, in the case of a large fibroid, the size of a seven months' pregnancy, with a view of diminishing the size of the growth by reducing the blood supply. The artery on the other side was not ligated, because the position of the tumor made it inaccessible. Six months later the tumor was one-third smaller, and was giving no inconvenience.

He quoted his last case operated upon to show how promptly uterine hemorrhage may be controlled by this operation.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

EDMUND E. KING, M.D., Tor., L.R.C.P., Lond.

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NEPHRITIS IN ITS SURGICAL ASPECTS.

Dr. E. L. Keyes (*American Journal of the Medical Sciences*, June, 1894) discussed "Nephritis in its Surgical Aspects" before the Congress of American Physicians and Surgeons at the meeting held in May at Washington. The paper is replete with information of a valuable character. There are two most important points dwelt upon at the close of the paper—points that should be carefully considered by every physician in the treatment of these cases. He says: I cannot terminate this study without here laying emphatic stress upon, and calling especial attention to, the value of abundantly flushing the urinary passages with bland mineral waters of the diluent variety, as a means of flooding out both pus cells and micro-organisms mechanically in many forms of chronic suppurative disease all along the urinary tract.

I know of no one single agent that possesses so much power for good. The enemy is decimated by this method of warfare, and can be taken at a disadvantage. I refrain from speaking the names of the mineral springs that possess this power—and there are many of them—because the commercial spirit of to-day prostitutes such utterances.

The character of the mineral ingredient in the spring is not material. All that is required is that one may be able to stomach the water freely—to drink a gallon, two gallons a day, or more, and that the water shall not affect the bowels.

A number of such waters exist. Distilled water does not do the work, nor does rain water. Ordinary clear spring water fails. In selecting a mineral water, it is only necessary to find a cheap one that may be consumed in vast abundance without a feeling of repletion—one that will pass rapidly through the kidney, having no influence upon the individual other than the diuretic one.

And, in closing, I wish further to emphasize two prognostic points: one is the common error of believing that the presence of pus in the urine is capable of accounting for a considerable amount of albumin. One constantly hears this expression: "Albumin in the urine accounted for by the pus." Surely this is true of a trace of albumin—but only of a trace. An admixture of blood with the pus, or of blood serum coming from an excoriated tumor in the bladder, or from an ulcer—this will account for albumin in quantity; but when there is no tumor, no stone, no ulcer in the bladder, there may be very considerable amounts of pus with barely a trace of albumin, and, if under such physical conditions the amount of albumin be relatively large, it usually means pyelitis—implication of the kidney in interstitial or parenchymatous change, and by so much becomes a factor of importance in prognosis. Anything over one-half of one per cent. by *weight* of albumin in urine, however purulent—if there be no blood in the specimen, no tumor, no stone, no ulcer in the bladder—becomes a factor in the question of prognosis when the point of the expediency of an operation comes to be considered. These cases may be assumed to have already reached a degenerative stage, and the chances of lighting up surgical kidney by operative interference below are relatively great.

He summarizes briefly the following conclusions:

- (1) Healthy urine is sterile.
- (2) Purulent urine is always microbic.
- (3) Microbic infection takes place from within the body by a number of methods in the course of disease; it is often brought about by instrumental manœuvres on the part of the surgeon.
- (4) A healthy organism and vigorous bladder may cope successfully with microbic invasion, and rid itself spontaneously, or with a little aid, of all damage arising therefrom—showing little or even no inflammatory response.
- (5) A suitable condition of the patient's soil is essential to the propagation and perpetuation of inflammatory phenomena upon the urinary tract—after microbic invasion.
- (6) This condition, intensified by traumatism and physical weakness, notably of the degenerative variety, is most intense when there is vesical distension with atony, and when the ureters are dilated, and the kidneys involved in the changes incident to tension below—namely, atrophy and sclerosis above, with or without surface catarrh.
- (7) Under these circumstances surgical pyelonephritis is most likely to declare itself as a result of microbic infection from below (occasionally from above)—in the course of suppurative disease or after operative interference.

(8) Asepsis, antiseptis, and sterilization of urine are ends to be aimed at in genito-urinary surgery—but, like all other greatest goods, not yet attained in perfection. Much, however, can be done by local means in a prophylactic and curative way, little by internal medication, and possibly as much or more than by any other means by flushing the urinary passages with natural mineral waters.

THE USE OF ICHTHYOL SUPPOSITORIES IN THE TREATMENT
OF PROSTATITIS.

Freudenberg reports (*Centralblatt für klinische Medizin*, 1893, No. 26) his experience with the use of ichthyol in from thirty to forty cases of prostatitis. The cases were almost exclusively of the chronic variety, or in the late stage of the acute form. The preparation used was the sulphate of ammonium ichthyol, made into suppositories with cacao butter. Some of the cases were gonorrheal or post-gonorrheal, and others were non-gonorrheal.

In the acute stage, especially in gonorrheal prostatitis, the author had no occasion to use ichthyol, inasmuch as he was quite satisfied with the result of the usual treatment for these cases.

Marked improvement was observed in the cases in a remarkably short time, and in nearly all cases complete cure of the existing symptoms followed. He uses the following formula: R.—Ammon. sulpho-ichthyol., 0.3–0.6–0.75 grammes (5–10–12 grains); ol. theobrom., 2–2.5 grammes (30–45 grains). One of these to be used in the morning after evacuation of the bowel, and another in the evening, at bedtime, and a third only if there has been an evacuation during the day. In some cases he combined iodoform with the ichthyol and cacao butter. The author concludes by the statement that in the treatment of prostatitis, at least in its chronic form, ichthyol is a valuable acquisition to the therapy of this disease.

The experience of Scharff, Ehrmann, and Ullmann in the acute and gonorrheal forms of prostatitis are quoted. These observers all report very satisfactory results.

Freudenberg advises against the employment of ichthyol in hollow suppositories, as when the former comes in contact with the rectal mucous membrane it might give rise to irritation.

Editorials.

THE UNIVERSITY OF TORONTO.

THE Convocation of the University of Toronto on June 14 was, probably, the most interesting event of the sort that has ever been held in Toronto. The Vice-Chancellor, in his short address, referred to the results of the examinations of the College of Physicians and Surgeons of Ontario as follows: "At the recent examinations conducted by the Ontario Medical Council five universities were represented in addition to Toronto. There were awarded 192 positions in the honor class. These were the results in the primary examinations. Forty-one honors were awarded in the subject of toxicology, and of these 28 were obtained by the students of Toronto University Medical Faculty, leaving 13 honors awarded to the competitors from the five other institutions. In chemistry, Toronto obtained 22 of the 27 honors awarded; in anatomy, 10 out of 12; in materia medica, 7 out of 7 awarded; and in physiology, 9 out of the 9 awarded. In the final examinations, out of 96 honors awarded 53 fell to Toronto. In the primary only one student succeeded in obtaining the honors in every subject, and he was a Toronto man." In addition, we learn that of the 171 students who passed the Council's examinations 90 (fifty-three per cent.) were from the Toronto University Faculty; and of the 75 who got the Council's license 40 were trained in the Toronto University Faculty.

THE ONTARIO MEDICAL ASSOCIATION.

THERE is no better time, as a rule, for a meeting of a medical association in this province than the month of June. The exigencies of a political contest in full blast from one end of Ontario to the other prevented many from attending this year; but, notwithstanding this drawback, the association made an excellent showing. The number present was fairly large, but not equal to that in some former years. There were

present 169, showing a fair increase as compared with last year, when the number was only 141.

In looking over reports of past meetings, we find the numbers registered vary from 88 (Hamilton, 1884) to 233 (Toronto, 1890). It is likely that in the future the numbers will seldom be less than 200, and we can see no reason why they should not be much greater. Last year it was generally remarked that the character of the papers was quite up to the average. In commenting at the time, we expressed the opinion that the association should advance, and not simply maintain its average. We think we are in a position to say this year that some advancement has been made, and that the character of both papers and discussions was above the average—perhaps better than in any former year.

We desire to congratulate the officers upon the admirable way in which they performed their duties. The president made an excellent chairman, and there is no doubt that the promptitude, tact, and firmness he exercised in wielding the gavel did much to make things run smoothly. He showed commendable modesty on two occasions in giving to his committees the chief credit for the success of the meeting; but it is only fair to add that he worked faithfully and well with the various committees for months previous to the meeting, and the enthusiasm he thus manifested did much to keep his committees in good working order.

There was a general desire expressed to keep Dr. Wishart in the position of secretary, and a corresponding feeling of regret produced by his decision to retain it no longer. During the six years of his tenure of office he worked ever faithfully in the interests of the association, and his persistent efforts, together with his unvarying courtesy towards all the members with whom he came in contact, have contributed much towards its success.

THE WORK OF COMMITTEES.

The machinery by which the society is worked includes the formation of certain temporary committees with definite work to perform. Two are especially important. The Committee on Papers and Business becomes responsible for the programme, so far as it includes the delivery of addresses, the reading of papers, and the various discussions which may arise. All special invitations to physicians living in other provinces, or other countries, are issued by this committee. It exercises a supervision over all papers presented, and excludes any that are considered undesirable. It decides the time allowance, and controls *the bell*.

The Committee of Arrangements, as indicated by its title, makes all the arrangements for the meeting. One of its most important duties is to provide for the entertainment of members living out of Toronto, and guests from a distance. In recent years the members resident in Toronto have

given a luncheon on the second day of the meeting. At the last meeting this entertainment was given in the building of the Royal Canadian Yacht Club on the island, under the chairmanship of Dr. Albert Macdonald, by virtue of his office as chairman of this committee. The luncheon was a decided success. Dr. Macdonald presided with grace and dignity. The short and witty speeches of Drs. Hingston, Fox, Stockton, Pilcher, Montgomery, and others, were all well received. After the weary and hungry had feasted to their hearts' content, it required an extra pair of *tugs* to get them back to the city.

THE PRESIDENT-ELECT.

There appeared to be a singular unanimity among the members with reference to their choice of a president. When the Committee on Nominations met there was only one name proposed—Dr. R. W. Bruce Smith, of Seaforth. When his name was presented by the chairman, Dr. Temple, for this important office, it was received with enthusiastic applause, and no vestige of a sign of dissent. Dr. Smith is a strong man in his own section, a progressive and able physician, a faithful worker in this and other medical societies, and well deserves the honor which has been conferred upon him. We hope that he will receive the same active support and cordial sympathy which Dr. McFarlane received from his committees and other members of the association, and that he will hold, in 1895, the most successful meeting the society has known.

THE INVITED GUESTS.

THE Ontario Association is always delighted to see our dear friend, the genial and cultured Dr. Cronyn, Buffalo; and, this year, our feelings assumed substantial form in unanimously electing him to honorary membership. Our list of honorary members has been purposely kept very small, and includes only the following: T. A. Emmet, New York; W. J. Mickle, London, England; G. M. Moore, Rochester, N.Y.; William Osler, Baltimore, Md.; the late Joseph Workman, Toronto; and now John Cronyn, Buffalo.

Dr. Hingston, of Montreal, the Canadian Paget (Lawson Tait at Montreal, 1884), is recognized at home and abroad as an able surgeon and a polished speaker. In 1892 he was chosen to deliver the address in surgery at the Nottingham meeting of the British Medical Association. The *British Medical Journal*, in commenting, said: "For the first time in the history of the association, one of the addresses to the general meeting has this year been delivered by a colonial member of the British Medical

Association. Professor Flint and Professor Gross have been heard as representatives of our American colleagues, and it was only right that the first opportunity should be taken to ask a representative of one of the many colonial branches to become a spokesman of the science and the practice of our art in Greater Britain." It will be remembered that Dr. Hingston's address was very well received, and highly complimented. The members present were more than pleased to see and hear Dr. Hingston this year ; and we have good reason for saying that one and all will be glad to give him a cordial and hearty welcome if, on future occasions, he honors us with his presence at our meetings.

The American contingent added much to the interest of the meeting. Dr. Fox, of New York, has visited us before, and we have only to say that, if he does not refrain from growing any deeper into our affections, he had better not revisit Toronto. If New York takes any interest in him, and does not want to lose him, it ought to make a note of this. Dr. Stockton, of Buffalo, paid his first visit to the association, and his interesting paper was highly appreciated. Dr. Pilcher, of Brooklyn, N.Y., was present, but did not read a paper. Dr. Montgomery, of San Francisco, is a Canadian, and happened to be making a visit in Toronto at the time of the meeting. His many friends in this vicinity were delighted to see him on this occasion, and will be glad to extend to him the most kindly greetings in future years, if he can be present at many or all of our annual gatherings.

Meetings of Medical Societies.

ONTARIO MEDICAL ASSOCIATION.

The fourteenth annual meeting of the Ontario Medical Association was held in the Educational Department of the Normal School, Toronto, June 6th and 7th, 1894.

The President, Dr. L. McFarlane, Toronto, occupied the chair.

This meeting was one of the most successful that has ever been held. There were in attendance some 160 members, 24 new members being added.

After the usual routine business of opening, Dr. A. J. Johnston presented a resolution asking that a committee be formed to take into consideration the question of contract and lodge practice. This was unanimously consented to.

The opening paper was one by Dr. J. H. Duncan, of Chatham, on the

USE OF STRYCHNINE IN PNEUMONIA AND CHRONIC EAR DISEASES.

He pointed out that it acted upon the vital nerve centres, making them more susceptible to external stimulation; that the heart weakness was due largely to the affection of the nerve centres by the pneumonic poison. This drug increased the irritability of the motor centres. No rule could be laid down as to doses, but he had given in average cases a thirtieth of a grain every three hours with marked benefit. He referred also to the statement made by certain investigators that its use increased the number of white corpuscles, and thus the phagocytic action of the blood would be materially increased.

Dr. Saunders, of Kingston, said that there was another positive element in the heart weakness, viz., the increased amount of resistance of the consolidation in pneumonic cases, and pointed out that the drug was of value in its direct action in stimulating the heart to overcome the obstruction until the crisis arrived.

Dr. Gaviller spoke of the great value he had derived from the use of strychnia in acute and chronic cases. He had found it particularly help-

ful in the bronchitis of children. He had found it assist very materially in the getting rid of the mucus from the bronchial tubes. He cited cases where he had used it in chronic bronchitis of the adult with great benefit, having pushed it in one case till tetanic spasms ensued. He had employed it with digitalis with good success, but he had not given the digitalis in heroic doses as some advocated.

Dr. Temple followed with a paper on

PLACENTA PREVIA.

He gave an account of the history of the treatment this condition had received in the past, and outlined the present lines of treatment. No hard rule could be laid down, but each case must be treated according to the symptoms presented. The great weight of evidence was in favor of the termination of gestation, especially if it were the first attack and severe, and prior to the seventh month. He considered that where hemorrhage occurred in the early months there should be no hesitation, if the mother's life was in danger, in sacrificing the life of the fetus. It would only be justifiable to prolong gestation where the woman was near the seventh month, the hemorrhage slight, the placenta latterally situated, and the woman in reach of a medical man. The patient should be put to bed, kept physically and mentally quiet, and an opiate might be administered. He did not consider there was any virtue in astringents. The procedure, if hemorrhage occurred severely after the seventh month, he repeated, was to deliver. The membrane should be punctured, the cervix dilated, if possible, the placenta around the os separated, and ergot administered. If the cervix were hard and undilatable and hemorrhage persistent, he advocated plugging, and that thoroughly and antiseptically, the woman being closely watched.

Dr. Burns alluded to the occurrence of post-partum hemorrhage in these cases, and the necessity of taking extra precautions. Another point he referred to was the greater frequency of placenta previa in multipara than in primipara.

Dr. Mitchell coincided with Dr. Temple in the main, but referred to the difficulty of always being able to diagnose these cases. He thought possibly there was a danger of considering that, whenever hemorrhage occurred during gestation, it was due to placenta previa; when perhaps this might not be the case. He had used, for dilating the os, Barnes' dilators. He referred to one or two satisfactory cases he had had, and spoke of the great gravity of all such.

Dr. Sangster said that his method of dilatation of the os was with the fingers, which he found to be the most satisfactory way of accomplishing it. Dr. Hillier agreed with this.

Dr. Oldright pointed out the dangers of plugging. The uterus was a dilatable structure, and, after the plug was inserted, there was danger of intra-uterine flowing. He thought that, in most cases, the os could be dilated by the fingers.

Dr. Harrison, of Selkirk, spoke of the difficulty country practitioners had in these cases by living, as a rule, so far from them. His plan was to dilate the os, and deliver as soon as possible.

Dr. McLaughlin wished to know why ergot should be given, as it produced tetanic spasm of the uterine muscle, not producing expulsive efforts. There was thus danger of causing the death of the child. He spoke of the old method of plugging with a silk handkerchief advised by the early teachers.

Dr. Powell reported having eight cases of placenta previa centralis, with seven recoveries. He emphasized the point that no two cases could be treated alike. He thought the statistics would be materially improved if the process of inducing labor in all cases were adopted where the diagnosis has been satisfactorily established.

Dr. Bruce Smith said that plugging should be the last resort in placenta previa. The uterus should be emptied at once. He cited cases in proof of the value of this procedure. He repeated that the patient should be very carefully watched.

Dr. Temple said he had not found post-partum hemorrhage occur after these cases any more than after ordinary ones. In reply to Dr. Mitchell, he said he took it that the diagnosis had already been made; the subject he was to discuss was the treatment of the condition. As to the use of Barnes' bag, he said they were not usually at hand. He contended in favor of plugging, where it was well done, to check hemorrhage and induce dilatation of the os. Of course the silk handkerchief would not fill the bill at all. He deprecated the use of ergot in ordinary cases of labor, but in these cases, where the child was not viable, its use was all right.

WEDNESDAY AFTERNOON.

The first item of interest on the programme was the President's address, which was a very able one, and was listened to with marked attention. He referred to the history of medicine in the past, gave an idea of its present position, and referred to its future possibilities. He outlined the rise and fall of the various schools of medical thought, dwelling more particularly on the present one, the principles of which depended upon a knowledge of physiology, pathology, and kindred sciences. He spoke of the immense strides that had been made in the development of these special branches, and of the immense aid they were to scientific diagnosis and treatment. He paid a high tribute to the late Dr. Hodder's influence

upon his students in stimulating them to the study of scientific medicine. He referred to the wonderful accuracy with which the educated physician of the present day can detect the presence of disease in the most occult parts of the human frame. He also paid a tribute to the workers in the line of preventive medicine, and to those who were studying the effects of the action of the attenuated virus of certain specific bacilli in the treatment of diseases caused by these bacilli. We were not in a position, he said, to speak of the value of animal extracts in the curing of disease. He advocated the establishment of an institute similar to Koch's and Pasteur's for the advancement of those studies, the results of which tended, perhaps, more than any others, to the well-being and happiness of the people. This should be under government control, and outside the influence of party politics. He argued that, if we had institutions for training farmers, schools for civil engineers, etc., aided by government, why not an institution of this sort, whose objects were the saving of life and the prevention of disease? If the province would take such in hand, he was sure that generous aid would be given in the way of bequests by many who are in sympathy with such a work.

Dr. McFarlane, on motion of Dr. Temple, seconded by Dr. Harrison, president of the Dominion Medical Association, was heartily thanked for his address.

THE TREATMENT OF STRANGULATED HERNIA

was the title of the next paper, read by Dr. J. Wishart, of London. Dr. Wishart's first point was a reference to what Mr. Jonathan Hutchinson had said regarding the fatality of strangulated hernia, how that, while mortality in all other surgical procedures had materially lessened in recent years, the mortality following operations for strangulated hernia had increased. This he attributed to the fact that the step of performing taxis had been left in the background, surgeons being too desirous of using the knife. Dr. Wishart gave a tabulated statement of some seventeen cases he had had during the past twelve years, in sixteen of which he had operated with twelve recoveries. He detailed the special points of interest in each operation.

Dr. Whiteman, of Shakespeare, discussed this paper and cited some interesting cases he had had, outlining the symptoms, diagnosis, and treatment. He spoke of the ease with which the operation could be done, and its freedom from danger. It was often difficult to know how much taxis should be used. If operation were done, and the bowel looked suspicious of gangrene, the question as to whether to return it or not was also difficult.

Dr. Rennie, of Hamilton, followed. He spoke of the high mortality in these cases. He believed there was a decrease instead of an increase.

All cases have not been reported, and we have no large tabulated statements regarding the question. He believed, too, that taxis should not be placed in a subordinate position. Chloroform should not be given any oftener than necessary, as it tended to excite vomiting. Where the bowel was gangrenous, it was because operation had not been done early. In this condition of affairs the use of Murphy's button would be a favorable form of treatment.

Dr. Grasett said that the importance of this subject was shown from the fact that it had come up for discussion so often during the meetings of these associations. He would not like to dispute such an authority as Mr. Hutchinson, yet he was of the opinion that the mortality after operation for strangulated hernia had decreased rather than increased. He had operated with good result on a patient eighty-nine years of age. As to gangrene no law could be laid down; each must be judged on its merits. There were fewer cases of gangrene now than formerly, because the strangulation was sooner recognized. He cited a case he had had where gangrene was present to a small extent where he had stitched up with a Lembert suture, returned the gut, and recovery followed.

Dr. Peters said that Mr. Hutchinson was certainly very pronounced in his view regarding the use of taxis, not by gentle manipulation, as one of the members had spoken of, but by using all the force he possibly could, and, after he was tired, of getting an assistant to continue the process. Notwithstanding the statistical report, he thought the results were exceedingly good because if these cases were left to themselves they would certainly, in most instances, end fatally. Under operation, thirty or forty per cent. being saved was a good record.

Dr. Teskey said that the maxims as laid down by the leader of the discussion were correct enough, but the difficulty was in knowing how to apply them; a great deal of judgment was required. In regard to taxis, he could understand how, in a large hernia which would fill the hollow of his two hands, one's whole strength might be placed upon it to reduce it, but this same rule would not apply to a very small hernia. With regard to the increased mortality in hospital statistics in this operation, he suggested that it might be due to the fact that the ordinary outside medical man was now so well trained that he undertook these operations himself with success, and only the worst cases were sent to the hospitals.

Dr. Wishart did not agree that this was an easy operation and lightly to be undertaken. There is always danger in opening the abdomen. He believed that where a country practitioner far removed from help met such a case, he should give chloroform and try to reduce at once, as delay was very serious. He had never seen in the cases where taxis had been used, even to a considerable extent, any damage done to the bowel

when he had opened up. The speakers agreed that where the knife had to be used the radical operation should be done, as a rule.

Drs. G. W. Fox, of New York, and Cronyn, of Buffalo, were invited during the session to seats on the platform.

The association then divided into sections.

SURGICAL SECTION.

Dr. Bruce Smith was appointed to the chair.

M'GILL'S OPERATION FOR PROSTATIC ENLARGEMENT*

was the subject of the next paper, by Dr. A. McKinnon, of Guelph. The reader of the paper gave the history of several cases he had had of prostatic hypertrophy, accompanied by urethral stricture, cystitis, and severe bladder spasms. The operation consisted in a suprapubic cystotomy and removal of a portion of the prostate, with very gratifying results. He outlined the technique of the operation fully, and of subsequent drainage. He quoted statistics furnished Bellfield at Chicago of forty-one such cases, where thirty-two had made recoveries, having regained the power of voluntary micturition.

Dr. Primrose discussed the question of the use of Petersen's bag and the dilatation of the bladder; how this would enable the operator upon completion of the abdominal incision of stitching the bladder wall and holding it by means of the stitches while it was being opened, instead of cutting down upon a sound, as Dr. McKinnon had advised. He asked also how hemorrhage was controlled, in view of the vascularity of the prostate. He advocated the advisability of perineal drainage, referring to the danger of infection of the cellular tissue in front of the bladder by the high drainage.

Dr. Grasett said that his experience was limited in this line of work, having done but one, and that a partial prostatectomy. The result in this case was good. He thought a combination of the suprapubic and the perineal method to be the best, so as to avoid the necessity of incising the mucous membranes above the prostate, the sections being scooped out from below, the opening above enabling the operator to exert pressure downwards on the gland.

Dr. McKinnon said that he had found hot water would control the hemorrhage, but, if necessary, the opening might be plugged.

Dr. R. Whiteman, of Shakespeare, followed by a paper on

CHOLECYSTOTOMY.†

He described the history of a case of obstructive jaundice. It was difficult to decide whether it was due to gallstones or malignant disease, but the diagnosis inclined to the latter. Cholecystotomy was performed in the

*See page 410.

†Will appear in THE CANADIAN PRACTITIONER.

usual manner with success. As all of the bile passed out of the abdominal incision, a number of interesting features were observed in connection therewith. On the administration of calomel the flow was lessened, but increased on the giving of salicylate of bismuth. It was also noted that when the bile decreased the urine increased, and *vice versa*. On *post mortem*, it was found that an epithelial cancer occupied the region of the duodenum at the junction of the bile duct.

Dr. Graham said he was much interested in this case, as he had seen it in consultation. The diagnosis was comparatively easy, as the distended gall bladder was in the position one would expect it to be, and the accompanying symptoms pointed in the direction of obstruction to the outflow of bile; but he had seen cases where the diagnosis was exceedingly difficult, the gall bladder having assumed such a curious shape as to make it unrecognizable. Regarding the treatment of catarrhal jaundice, he advocated the use of large doses of calomel at first, then salol for three or four days, followed by the continuous administration of salicylate of soda. He was pleased with the experimentation on these cases, as it tended to throw light on the obscure pathology of this trouble.

Dr. Teskey reported the history of a case where cholecystotomy had been done, in which he had assisted Dr. Powell and Dr. A. A. Macdonald in operating. The gall bladder was not enlarged. The crescentic incision was made through the abdominal wall. There was considerable inflammatory adhesion of the omentum. Seventy small gallstones were removed. On account of the adhesions, it was impossible to reach the duct, but it must have been patent, as the bile soon flowed through to the intestinal tract, as was shown by the coloration of the feces and the closure of the incision.

Dr. Oldright told of a case he had operated upon where there was pyemia, the seat of pus formation being supposed to be in the neighborhood of the liver. A stone was found blocking the cystic duct, which was pressed along the duct by means of the fingers into the duodenum. The diagnosis was supposed to have been distended gall bladder before opening the abdomen; on opening, the lump was discovered to be floating kidney.

Dr. Macdonald said that in these cases death occurred after the primary operation in 19 per cent. of the cases, but where it was done as a secondary the death rate was reduced to about 10 per cent. An objection to this operation was the loss of such a large amount of bile which was needed in the intestinal economy. By its loss there was intestinal indigestion. This loss would not occur after cholecystectomy. Another procedure was cholecystenterostomy by aid of Murphy's button. Murphy's latest results show 100 per cent. of recoveries.

Dr. Starr presented a patient suffering from

LUMBAR HERNIA.

About twelve months ago, while stooping down and lifting, he was seized with a stitch in the side. This was accompanied by the occurrence of a swelling about the size of a duck's egg in his back below the last rib. The lump has persisted. It is slightly tender on pressure, elastic to the touch, and reducible. As it returns into the abdominal cavity it gives a gurgling sensation, and omits a tympanitic note if percussed while the patient strains. Its exit was through the triangle of Petit. Its relations. Dr. Starr showed by means of charts.

MEDICAL SECTION.

Dr. Mitchell in the chair.

THE ARTIFICIAL FEEDING AND CARE OF CHILDREN

was the title of a paper by Dr. McCullough, of Alliston. He condemned the use of proprietary foods, and spoke of a combination of foods he had used, indicating the amount prescribed for an average-sized child at varying periods up to the age of twelve months. The artificial food, especially in the country, had to be at once cheap and easily obtainable. The composition he advocated consisted of barley water, diluted cow's milk, and sweetened water.

Dr. McPhedran thought the general principles outlined in the paper good, and hardly to be improved upon. The remarks as to temperature of food reminded him of the Irish nurse who got the proper temperature of the child's food by inserting her hand in it—if it burnt it, too hot; otherwise, all right. But, seriously speaking, that was about the way people tempered a child's food. He advocated the thermometer for this. The food prescribed by the paper read might suit in the country, where the sanitary conditions were good, but not in the city; and physicians had to resort to other artificial foods—often barley water alone, tea, broths, etc., sometimes a little starch and arrowroot. But there was no universal rule, and each case had to be considered by itself.

Dr. Gregg severely denounced proprietary foods. Though people had been warned as to the evil nature of them, these foods are still largely used—more so in Canada than in the United States. From forty to fifty per cent. of such foods consist of starch, which an infant under seven months is unable to digest. He thought that instead of whole barley being used, as advocated by Dr. McCullough, crushed or even ordinary pearl barley was preferable, because more easily prepared and attended with better results. He thought the subject of fixing amounts for children at certain ages beyond our control, as the stomachs of infants were of different sizes at the same age. The proper rule was to give the child as much as it wants; if it takes too much, the surplus will be thrown up and no harm

done. Sterilization of milk was not important, save in large cities, where abundance of fresh milk was not procurable. Experiments in American hospitals showed that children were practically starved to death by the use of it where it had been sterilized at a temperature of 212° . As a result, the practice was to have the milk placed at a temperature of about 145° for fifteen or twenty minutes.

Dr. Machell said that although part of the albumen in cow's milk is coagulable, part is not, and in this respect it is similar to the mother's milk, but in the latter the percentage which is non-coagulable is twice as great as in the former. He agreed with Dr. Gregg in denouncing proprietary foods, which, he said, were manufactured, not for the purpose of benefiting patients, but to make money, and physicians should not recommend them when other good foods could be prescribed. He advocated the Berlin bottle, obtainable in all drug stores at a cost of fifteen cents.

Dr. McCullough, in reply, said that pearl barley did not come up to the mark, as the virtue of the ordinary barley was the musciline principle, which is the most active. It was contained near the surface of the hull. In pearl barley it was removed. The amounts mentioned in his paper were only guides, and not intended to apply in every case. He did not think, in the case of a child any more than in that of an adult, that food should be taken till vomiting results.

Dr. Price Brown read a paper on

ATROPHIC RHINITIS,

which was exhaustive in the cause and treatment of this trouble. Though believed by some, it is by no means incurable, but requires a long and careful course of treatment.

Dr. Wilson, of Fenelon Falls, asked if any constitutional treatment was used. He thought, in some of his patients, he obtained good by using some of the alteratives. He thought the origin of the disease was in infancy, and caused by the carrying of the infant with bare head, or by exposing it to draughts or cold temperature; also later on in life by the clipping of the hair to the scalp.

Dr. Price Brown said he used the ordinary prescribed tonics. Patients improved in health without any medicine if the offensive discharges can be got rid of, but these foul secretions do injury to the system. Where a tonic was required, he generally gave iodine and strychnine. Douches of water in large quantities were objectionable. Where secretion took place was where cleansing was required. He did not approve of covering children's heads; he considered it well, indeed, to give them cold baths.

Dr. Doolittle explained the operation of electrical massage worked by a small storage battery which he showed.

Dr. Campbell, of Seaforth, read a paper on

PLACENTA PREVIA,

giving the history of cases in his practice, and touching on most of the points raised on a discussion of the subject at an early part of the convention.

Dr. Temple wished to know, as Dr. Campbell advocated early termination of labor, why, in a case he cited, he did not follow this rule. He did not see, either, the rationale of giving sulphate of magnesia after delivery, as blood had been lost and the patient was weak, unless it was to prevent milk fever.

Dr. Spence agreed with Dr. Temple. He spoke of the difficulty of the diagnosis. Good common sense was necessary in the treatment, and by the exercise of this one would get as near the subject as by following any particular treatment laid down. He reported the different stages of an important case in his practice. He thought sufficient aseptic precautions were taken by thoroughly washing the hands with soap and water.

Dr. Scadding described the method of dilating the os followed by Dr. Harris, of New Jersey—the thumb being placed at one side of the cervix, while the first and second fingers are flexed, thus getting the strongest muscles with which to dilate. In a series of eight cases he was able to dilate the os in each of them within twenty-five minutes.

Dr. Mitchell asked the reason for using injections so frequently after labor terminated. He did not think injection of antiseptics necessary, unless there was reason for it; and this could be readily ascertained if the patient was watched.

Dr. Campbell, in reply to Dr. Temple, stated that the patient was being watched by him, and there had not been enough loss of blood to weaken her; otherwise he would have operated. His object for delay was that the patient was not in a fit state to be delivered, the os and the cervix being rigid. He gave chloral to soften the os and relax the parts, accompanied with a small dose of morphine. In this way he prevented laceration. The reason he syringed out the vagina afterwards was to prevent sepsis.

EVENING SESSION.

The first paper of this session was read by Dr. J. E. Graham, the amphitheatre of the Normal School being well filled by medical men, lady practitioners, and students in medicine. The subject of Dr. Graham's paper was

SOME REMARKS ON CHRONIC DISEASES.*

He made special reference to Bright's disease, the anemias, and tuberculosis. Treatment of these cases required a great deal of patience and

*See page 399.

tact. Strict attention should be paid to the patient's diet, clothing, and general environments. Cases of parenchymatous inflammation of the kidneys were quite amenable to treatment ; prognosis was fair even after edema occurred, even in apparently chronic cases. He knew of one case in which, contrary to the general teaching, the patient did best on nearly a complete meat diet, after having tried the milk diet with unsatisfactory results. Regarding anemia, the gastric form, he had seen it helped very much—in fact, cured—by lavage of the stomach every second day and the exhibition of arsenic. In another case of a woman aged sixty-five with a dilated heart, who had nausea, vomiting, diarrhea, and considerable emaciation, accompanied by elevation of temperature, making the case suspicious of being one of pernicious anemia, until the blood corpuscles were counted and found not diminished in numbers, it was found that there was a diminution of urea in the urine, although no albumen nor sugar were present. Here the anemia was due to the poisoning of the urea. Rest, careful dieting, administration of iron and arsenic, produced a great improvement. Cases of other varieties of anemia were referred to where treatment based on a careful observation of the condition present led to recovery. Regarding tuberculosis, most patients must be treated at home, and this could be done very satisfactorily by attention to the above-mentioned precautions, particularly in the first stages. As to medicine in these cases, he recommended the use of creosote as being the most helpful. The points to be observed in treating all chronic affections were, first, the necessity of more hopefulness in treatment ; second, greater care in making an early diagnosis ; third, making a practical use of all the more recent discoveries in pathology and management of such diseases.

Dr. Bruce Smith followed, and pointed out very good results that followed examination of the stomach contents. He also referred to the causation of anemia, and in its treatment he knew of nothing better than the old Blaud's pill, after the bowels had been opened with saline. He believed that, in pernicious anemia, complete rest should be enjoined on the patient, and it was necessary that the functions of the body should be naturally performed before the administration of medicine. He would give arsenic in small doses first, with compound tincture of gentian. He spoke highly of the use of the stomach tube in dyspepsia, and he had found good results follow the use of a glass of hot water containing half a dram of soda half an hour before breakfast in gastric catarrh. He, too, spoke very highly of creosote in the treatment of pulmonary tuberculosis, administered with *nux vomica*. These patients did best, he thought, in the country, where the air was pure and they could obtain lots of cream. Cream was much better than cod-liver oil.

THE SYMPOSIUM ON INFLUENZA

came next, Dr. L. M. Sweetman opening the discussion, his paper dealing with its general features. He spoke of its causation, its usual symptoms, its tendency to cause cardiac asthenia or pneumonia more particularly. He referred to the many cases of sudden death during convalescence. Regarding treatment, the big point was rest. He did not advise the use of the coal-tar products for the fever, except phenacetin in small doses. He also recommended modes of treatment for the other forms of the disease.

Dr. Lett, of Guelph, spoke of its nervous phenomena. This form was very common, owing to the tendency of people nowadays to become the subjects of nerve strain, as a result of the tremendous activity of the age. He referred to the various neuralgias, neurites, paralyses, and mental affections, such as melancholia, occurring with la grippe.

Dr. Gregg spoke of the thoracic phenomena seen in this disease. There was a great tendency towards bronchitis pneumonia, and tuberculosis. The bronchitis in such cases attacked the right side more than the left. He spoke of a form of pneumonia which he had seen with indefinite symptoms. It did not run a normal course; the onset was insidious, there being no chill; there was no cough, and no râles, perhaps; but the temperature might run high, dyspnea be present, and some dullness on percussion, the character of the pneumonia being modified by the poison of the influenza.

Dr. Harrison, of Selkirk, in speaking of the digestive phenomena of the trouble, gave a history of his own case, the principal features being dizziness, loss of appetite, bilious vomiting, with increased pulse and respiration, and some rise in temperature. It made him very ill. He got up, went out in the cold, and in two days was attacked by the thoracic form of the trouble, which he was not yet rid of. To his remembrance, in his early days in England the coryzal form was most common. He found stimulants good in many cases, especially strychnia. Nux vomica was useful in the stomachic form.

Dr. A. H. Wright's paper referred to the

INFLUENCE OF LA GRIPPE ON THE PREGNANT AND PUERPERAL WOMAN.

Influenza, he said, might cause abortion in the pregnant woman, especially in severe cases where the temperature was high and the prostration great. The danger was still greater where thoracic complications were present. Severe gastro-intestinal catarrh accompanying this disease was a serious complication, and frequently terminated pregnancy. The high temperature might lead to the death of the fetus. The influenza itself might be transmitted to the fetus, but he did not consider this likely. Menorrhagia and metrorrhagia were not uncommon accompaniments in this

disease. Influenza uncomplicated induced abortion less than any other of the infectious diseases. During labor, this disease was a serious complication, its tendency being to weaken the expulsive efforts of the uterine and abdominal walls. Dr. Wright had collated nineteen cases of influenza, made up of lying-in women at the Burnside Lying-in Hospital. All recovered without any serious symptoms in from two to five days. Perfect rest in a dry, warm place was the best treatment; the influenza germ loved moisture and cold. On the whole, this class of patients stood influenza well.

Dr. McDonagh spoke of the phenomena of influenza as seen in the nose and throat and adjoining cavities, the antrum, the ethmoid sinus, frontal sinus, etc. He pointed out the characteristic features seen where each of these was involved. The effects of the poison were also noticed on the nervous and muscular structures of the parts involved. The sense of smell was often lost.

Dr. Fox, of New York, then gave an exhibition of lantern slides, illustrating syphilis of the skin principally, in its various forms. The first slide showed an immense nevus immediately below the eye on a patient's face. The second slide showed the appearance of the face after its removal. The operation had been a brilliant one, as the nevus had been completely eradicated. The patient himself was present, whom the members examined. The result was extremely good. The other slides which had been prepared by Dr. Fox were excellent, and the views of them upon the canvas were splendid illustrations of all the various forms of the cutaneous syphilides. A vote of thanks was tendered to Dr. Fox for his interesting and instructive lecture.

THURSDAY MORNING, JUNE 7TH.

Dr. Harrison, of Selkirk, in the chair.

Dr. E. E. King read a paper on

UNCURED GONORRHEA, CAUSES AND CONSEQUENCES.

He dealt with the unfortunate result of an infected person marrying, and the great care that should be taken, in examining, to see if the disease had been wholly cured. He dwelt on the difficulty of getting these patients to follow directions and to appreciate the really dangerous character of the trouble. He read certificates furnished by physicians to the husband of a patient of his who had taken the precaution before marrying to secure documentary evidence as to his freedom from this disease, when a careful examination would have shown that the disease was still lingering. He characterized the giving of such certificates as actionable malpractice; only the nature of the affair relieved the culpable physician from having the matter aired in a court of law.

Dr. W. H. B. Aikins asked that Dr. King be more specific as to the character of injections he prescribed.

Dr. Campbell, of Seaforth, liked the paper, and thought the subject important. In his practice he had not had a case of disease of women produced by this cause. He thought no man ought to marry when afflicted with this disease, and physicians ought to be careful about giving certificates in relation thereto.

Dr. Harrison thought it was by reason of his being a country practitioner that he had not seen these cases. At an American medical convention he attended, it was recommended there that there should be circumcision in the case of all male infants as a protection against syphilis and gonorrhea; but considering that only one in a thousand is afflicted with the troubles, he did not think that all should be deprived of their foreskins. If reports were true as to the results of city education, he thought the persons in the city ought to be very much interested in the paper read.

Dr. King, in reply, was pleased to state that the percentage of cases in cities was not so high as was sometimes reported, though more frequent than imagined. The disease was one alike neglected by patient and physician. It would take too long for him to indicate the treatment. There were cases of uncured gonorrhea, not permanent in their symptoms; and a person might have the dregs of the disease locally situated and not be thoroughly aware of it; having had it so long, he had become used to it. Too often, when such a patient came to the physician, he got just the advice he wanted—to be told that he was all right. The urine had to be carefully examined for shreds. Without doing this, one could not safely give a certificate.

Dr. Graham Chambers read a paper on the

TREATMENT OF MORPHIA POISONING BY PERMANGANATE OF POTASH,*

giving a report of experiments. These experiments were made with the view of comparing the results with those obtained by Dr. Moore, who had himself taken three grains of morphia and followed it by a few grains of permanganate of potash, suffering no ill effects. Dr. Chambers had made some experiments on dogs, having given as high as six grains to a dog at one dose, hypodermically followed by ten grains of permanganate of potash, without marked change in the animal's condition. The inactivity of the alkaloid he believed was due to the oxidation of the morphia by the permanganate of potash. The doctor presented to the association some reactions of permanganate solution and morphia solution, the permanganate solution becoming decolorized.

Dr. Lett said the subject was important, and, if permanganate of potash did all that was claimed for it, the discovery would be hailed with satisfac-

*Will appear in THE CANADIAN PRACTITIONER.

tion. Dr. Chambers, in his paper, had referred to Dr. Moore's experiment, but Dr. Lett thought, before that could be relied on, it should be ascertained whether Dr. Moore was a morphine eater. Dr. Chamber's experiment with a dog produced a condition similar to what Dr. Lett had seen produced by strychnine, so he did not think the test could be relied on. The test for the detection of morphia shown by Dr. Chambers, he thought, very delicate. He wished to know how to get rid of the products in the urine so as to detect a very small portion of morphia.

Dr. Cameron thought, if there was much organic matter in the stomach, that the permanganate would lose its effect in oxidizing the matters there, before having an opportunity of operating on the morphia itself.

Dr. McLaughlin reported the case of a woman patient coming under his observation where permanganate of potash was used hypodermically, and did no good.

Dr. Chambers, in reply, said that with regard to the action of permanganate on foodstuffs it was a disputed point, but that from experiments made by himself it appeared that foodstuffs would not interfere with its action. There was a difference in the quickness of its action when such were present. As to its action on alkaloids, as inquired about by Dr. Cameron, he said some work had been done. He had made experiments with strychnine and found the permanganate was decomposed by the strychnine, but he thought it was of doubtful utility in poisoning by this drug. As to detection of morphia in urine, his method was to make it alkaline and then evaporate down. The best test was the iodic test.

THURSDAY MORNING, JUNE 7TH.

SURGICAL SECTION.

The first paper in the section was presented by Dr. Welford, of Woodstock, entitled

FRACTURES AND DISLOCATIONS OF THE VERTEBRÆ.*

His plea was for operation in these cases before degenerated changes take place in the cord. He reported two cases he had had where considerable relief was afforded by operation. He maintained that if they had been operated upon earlier there would have been a good chance for complete relief. The first case was a fracture-dislocation. All above the sixth were dislocated forward. The right arch of the fifth was fractured. Spicula of bone protruded into the canal, but did not puncture the membranes. On the sixth day he was called. Pulse was 155, temperature 104°, and respiration feeble. Although some relief was afforded, the patient succumbed. In the second case, there was a fracture-dislocation between the eleventh and twelfth dorsal. The posterior arches were

*Will appear in THE CANADIAN PRACTITIONER.

removed. The sheath was adherent to the arches, so that the marrow was exposed. The patient gained some power in the right leg and foot, and a return to sensibility two and a half inches below where it was prior to the operation. There was no improvement on the left side, nor in the bladder nor rectum.

Dr. Peters agreed that the operation should have been done earlier. Degeneration took place in such cases in three days. Every spinal injury was not favorable for operation. Where it was known that the fracture-dislocation had severed the cord across, operation was useless. If there was a history of motion and sensation for a short time after the lesion, hemorrhage was likely the cause, and improvement would take place without operation.

Dr. King presented a blacksmith who had sustained an injury to the back while working under a heavy cart. The props slipped and the cart fell on top of him, bending him forward so that his head was brought between his knees. Both clavicles were anteriorly dislocated, and a knuckle presented in the neighborhood of the eleventh dorsal vertebra. There was considerable separation between the eleventh and twelfth. There was no impairment, however, of motion or sensation, but there was difficulty in getting the bowels to move.

Dr. Spencer thought that the patient presented had not sustained any injury to the spinal cord, that there was no effusion of spinal fluid, but that hemorrhage had probably taken place.

Dr. Welford closed the discussion.

Dr. N. A. Powell then interested the association with an illustration of his method of photographing pathological specimens, and also of procuring photographs of operations while in progress. He also showed an ingenious device for making the flash in taking photographs by the flash light.

Dr. Meek, of London, reported four cases of abdominal section. The first was for dermoid cyst of the ovaries, the second for hematosalpinx, the third for suppurative appendicitis, and the fourth for cancer of the pylorus—cholecystenterostomy. He had good success in all. The history of the cases were very interesting.

Dr. Bingham read a paper on

APPENDICITIS,

in which he discussed the classification and treatment. He also gave the report of a case. In the first type of this trouble the symptoms were mild, being usually associated with accumulated masses of feces in the cecum. Recovery usually followed. The second class was where the disease, progressed to suppuration. These cases required to be closely watched,

for there was great danger of perforation and general peritonitis. He thought this not likely to occur within four or five days. Perforation sometimes took place into the intestine, bladder, or externally. The third class was the relapsing appendicitis. Operation in these cases might be left till the subsidence of the acute attack.

Dr. McKinnon and Dr. Whiteman discussed the paper.

The next paper was by Dr. J. D. Gibb Wishart, the subject being

EMPHYEMA OF THE ANTRUM.

This was the history of an obscure case; it was difficult to diagnose because few of the symptoms were referable to the antrum; the pain was outside the orbit; the patient failed to lie on the diseased side, the reverse being usually the case. Then the character of the discharge was white, like casein, instead of yellow, as is usually the case. Drilling was performed through an upper molar cavity, and the antrum washed and drained.

Dr. Price Brown discussed the paper.

Both sections then adjourned. About two hundred of the members were then conveyed to the Royal Canadian Yacht Club on the Island, where the city members entertained the outside members to luncheon. A very enjoyable social time was spent.

The association reassembled at 4 p.m. to listen to a paper on

GASTRECTASIS

by Dr. Stockton, of Buffalo. He defined the meaning of the term, and spoke of its effects on the functions of the stomach. For its relief, drugs were of not much service. He recommended the use of lavage and faradization of the stomach walls. He showed Einhorn's button, which the patient swallowed for the electrical seances, a cord being attached to the electrode to withdraw it when the treatment was over. Dr. Stockton also showed an ingenious device of his own for the electrical treatment. It consisted of an electrode on the end of a stillette, which was introduced through the stomach tube, which had previously been inserted to convey the salt water needed. At the end of the treatment, the electrode could be withdrawn, then the salt water, then the stomach tube.

Dr. Doolittle gave the history of a severe case where he had used Einhorn's apparatus with good success.

Dr. Hingston thought such treatment was unnecessary, if the patient would observe three rules: First, to eat less; second, to eat more slowly; third, to refrain from drinking at meals.

Dr. Davidson said that the precautions referred to by the previous speaker were not sufficient, in his idea, when the disease had become established. He favored the treatment by lavage and electricity.

Dr. W. H. Hingston, of Montreal, then read a paper on

CANCER OF THE BREAST.

He referred to the various theories with regard to the causation, inclining to the microbic or inflammatory. He advised that the axillary glands should not be removed unless affected. In dissection, after the primary incision, the finger was better than the knife to enucleate the mass. If the pectoral muscle were affected at all, he advised its entire removal. The stitches should be put in back from the line of incision, so as not to cause any undue irritation to the edges. He advocated removal even up half a dozen times, if necessary.

Dr. E. E. Kitchen, of St. George, gave a graphic account of the great International Congress held at Rome, to which he was a delegate.

Dr. J. F. W. Ross read an interesting paper on

PAPILLOMA OF THE OVARY,

reporting two cases. The disease usually attacked both ovaries. Two varieties might be spoken of: the first being supplied to the growth before its rupture of the capsule, till which time it might be considered as non-malignant; the second, its condition after rupturing the capsule, when it might be looked upon as malignant. He advised early operation. He presented sketches and water colors of the pathological specimens. He also presented a cyst of the broad ligament which he had just removed.

Dr. McPhedran read a paper on

DIURETIN,*

and cited several cases where it had been useful. These were cases of arterio-sclerosis and chronic cardiac diseases. He had found diuretin very helpful in relieving the symptoms where edema was present, or where there was mitral incompetence. In large doses, its effect was similar to poisoning by salicylic acid.

EVENING SESSION.

The first paper was by Dr. Primrose on

SPRAINS.

He went into the pathology, diagnosis, and treatment of these cases. He presented the history of some cases. His plan of treatment consisted in swathing the joint with a large quantity of cotton batting, and bandaging over this very firmly. Massage was useful. Passive movements should be used where there was danger of adhesions at the end of eight or ten days, especially if accompanied by a Pott's or a Colles' fracture.

The secretary then read a communication from the secretary of the Prison Reform Association regarding the establishing of a home for

*See page 416.

inebriates. The association passed a resolution in favor of this movement.

Dr. McKinnon introduced a motion recommending the establishment of a home for epileptics. This was unanimously supported.

Dr. E. Herbert Adams introduced a resolution favoring the establishment of a home for sufferers from pulmonary tuberculosis. This was also unanimously carried.

Dr. Johnston then presented the report of the special committee appointed to report on the matter of lodge practice: "The special committee on lodge practice begs to report that, in their opinion, the time has arrived when this association should pronounce its judgment on the evils of club, lodge, or contract practice, or engaging to do work at any rate below that fixed by the legal tariff of the district, and should take some decided action in, first, calling upon all members of the association to cease making, after the end of the current year, any further engagements to do such work; second, that the secretary of this association communicate at once with the Medical Council, and urge that body to issue a circular to each member of the College of Physicians and Surgeons, informing him that any medical man persisting after this year in doing lodge or club practice shall be considered guilty of unprofessional conduct, as defined by the statute in such case made and provided."

Certain phases of the question were warmly discussed; the resolution carried.

The report of the Committee on Nominations was adopted. The following gentlemen were elected as officers of the association for the coming year: President, Dr. R. W. Bruce Smith, Seaforth; vice-presidents: first vice, Dr. A. A. Macdonald, Toronto; second vice, Dr. A. B. Welford, Woodstock; third vice, Dr. W. J. Saunders, Kingston; fourth vice, Dr. Forest, Mount Albert; general secretary, Dr. J. N. E. Brown, Toronto; assistant secretary, Dr. Charles Temple, Toronto; treasurer, Dr. J. H. Burns, Toronto.

The general secretary, Dr. Wishart, then gave his report.

Dr. Harrison, president of the Dominion Medical Association, extended a hearty invitation to all the members to attend the Dominion Medical Association to be held in St. John, New Brunswick, in August.

The president-elect, Dr. R. W. Bruce Smith, was then installed, and after a neat speech, in which he thanked the association for the honor done him, he declared the fourteenth annual meeting of the association adjourned.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—I desire to direct the attention of the medical profession to the pernicious system of lodge doctoring throughout the country. In Port Hope it has become a perfect craze. There are here a great many societies, nearly all of which have lodge doctors galore. These attend the members of the different societies for \$1 to \$1.50 per member for a year.

Just think—from two to three cents per week! There are in this town about four hundred and fifty men who belong to one or more societies employing the cheap lodge doctors, and some men have the services of more than one doctor, at the rate of \$1 to \$1.50 per doctor per year. Pretty cheap, isn't it?

Surely there cannot be any satisfaction for a physician to attend people at the above prices; and, besides, the necessary medicines are included. Why do these doctors attend the lodges at such a low rate? Because they expect to attend the families of members of the societies, and thus recoup themselves. Can anything be more unprofessional than such tactics, and such underhand methods of obtaining patients? But these lodge doctors claim that the members of the societies are all healthy and comparatively young, and thus do not require much medical attendance. But just wait a few years—for most of the societies are young in employing physicians—till these same men become older, when the need of medical attendance will become something enormous in a body of four or five hundred men. Some, as time goes by, will require medical attendance daily and nightly for months at a time, and then, and only then, will the absurdity of the whole affair become apparent to the selfish lodge doctors. I have, in the last six years, since coming to Port Hope, been offered the position of lodge doctor for three different societies, but declined in every case, much to the surprise of the members of the societies. Now, I am informed, on very good authority, that this custom of lodge doctoring is springing up in nearly every place in Ontario, and even in small places, where there is but one doctor for miles around.

What can these people be thinking of, and what does the doctor himself mean? Surely the doctors have themselves to blame for the custom, and they can remedy the matter if they only have the courage to do so. For they ought to know that by taking positions of this kind they lessen the incomes of the members of the profession. For if the doctors all refuse the offers of positions of the societies, there will be just as much money made—and a great deal more.

Now, some persons writing in defence of this miserable lodge-doctoring business, claim that the physicians who oppose this system have been unable to obtain positions as society doctors; but this is not the case, for I believe that almost any doctor can obtain a position as lodge doctor if he so desires. A position of lodge doctor is humiliating, in the highest sense of the term. How can these societies expect to obtain the best medical treatment at such low rates? There must necessarily be neglect in a great many cases.

A theory has been advanced that this lodge doctoring is necessary for the poor who are unable to pay for medical attendance at the ordinary rates, but such poor people do not belong to these societies—at least not in Port Hope. The members are nearly all able to pay for their own medical attendance.

This lodge-doctoring rage is of far greater importance to the medical profession than the annual tax imposed by the College of Physicians and Surgeons of Ontario, to which so much attention has been directed lately. Why cannot the Medical Council, when it is reorganized, deal with this gigantic evil?

I need hardly dwell any longer upon the injustice of the custom of lodge-doctoring, but would call upon the candidates for the approaching Medical Council elections to give us their opinions and intentions in regard to this matter, when elected to represent the medical men of the province in the Council of the College of Physicians and Surgeons of Ontario. Would it not be a good plan to disqualify all physicians accepting positions as lodge doctors?

F. T. BIBBY, M.B.

Port Hope, May 31st, 1894.

Book Reviews.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynecology, Ophthalmology, Laryngology, Otology, and Dermatology, by Professors and Lecturers in the leading Medical Colleges of the United States, Great Britain; and Canada. Edited by J. M. Keating, M.D., Colorado; Judson Daland, M.D., Philadelphia; J. Mitchell Bruce, M.D., London, Eng.; and David W. Finlay, M.D., Aberdeen, Scotland. J. B. Lippincott Co., Philadelphia.

Volume II., Third Series. The section on medicine includes clinics on many interesting subjects, among them being clinics on Asiatic cholera, hepatic colic, appendicitis, cirrhosis of the liver, aneurism, etc. W. H. Porter, New York, believes we should not wait until we have demonstrated the presence of albumen and casts in the urine before deciding that we have parenchymatous disease of the kidneys, because in many cases we will only find a diminution of urea and uric acid, with a scanty high-colored urine. In these latter cases, a sudden cold or excesses of eating or drinking, or operations on the kidneys or adjacent organs, increases the amount of work thrown on the overworked and poorly-nourished kidneys, and the nervous system becomes influenced by the retained by-products; toxic symptoms and death ensue. His treatment, early in the disease, is a well regulated mixed diet, stimulation of the secreting and excreting power of the bowels, tonics, with pile and pancreatic extracts to aid digestion.

R. W. Parker, London, believes in early treatment in congenital club-foot. He begins with gentle manipulations of the foot every day, and in many cases he is able to remedy the deformity without further trouble. The whole limb should be massaged several times a day to strengthen the muscles. As a rule, he does not use mechanical appliances until all other means have failed, and then he employs both active and passive movements to ensure a normal development of the rest of the limb, the splints being removed to effect this.

Under the head of surgery, an interesting clinic on septic arthritis is given by J. H. Dunn, Minneapolis. He presents several cases in which the patient has been subject to painful joint affections a few weeks after having contracted gonorrhea. These have, in some cases, been followed by eye trouble, which, together with the joint affections, did not disappear until the gonorrhea was completely cured. Later gonorrheas brought back the joint and eye affections with increased intensity. He also describes several cases in which septic joints have followed the absorption of pus cocci and their products after dysentery, the exanthemata, and suppurating wounds. He first removes the exciting cause, and applies hot fomentations, blisters, uses the cautery or taps the joint according to circumstances, and later fixes the joint in its proper position until the acute stage is passed, and then employing massage and douching until the function of the limb is restored.

Stephen Smith, New York, thinks more care should be taken in examining old people who have fallen upon the hip, as he believes there is often a partial fracture of the neck of the femur which is undiscovered. The symptoms of

incomplete fracture are more or less eversion of the foot and a slight shortening of the leg. Treatment is rest on a firm bed, an extension weight of two or three pounds, and sand bags to support the leg in position.

Genito-urinary diseases includes a clinic by F. S. Watson, Boston, in which he discusses the uses of suprapubic cystotomy as opposed to external perineal urethrotomy in the treatment of hypertrophy of the prostate gland. In uncomplicated cases, where drainage is the only requirement, he thinks the latter may be used; but he has come to the conclusion that the suprapubic method, though not quite so safe, still is more efficient, as it gives better drainage, and allows for the removal of any foreign matter in the bladder, or of parts of the prostate, if necessary, without further cutting. Both operations are described, together with the radical operation for the removal of the prostate gland. The style and typography are in the same good style as the former numbers of this series.

HOW TO USE THE FORCEPS, with an introductory account of the Female Pelvis, and of the Mechanism of Delivery. By Henry G. Landis, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in Starling Medical College, Columbus, O. Revised and enlarged by Charles H. Bushong, M.D., Assistant Gynecologist and Pathologist to Demilt Dispensary, New York. Illustrated. E. B. Treat, publisher, 5 Cooper Union, 1894. Price, \$1.75.

This is an exceedingly valuable little book, although we are not certain that the first edition was as highly appreciated as it should have been. The description of the anatomy of the pelvis is especially good, being clear, concise, and well illustrated. Some of the author's statements with reference to the mechanism of delivery and proper application of the forceps, especially in vertex and face presentations, differ materially from the teachings of many authors of high repute in the science and art of obstetrics; and, while we are not inclined to endorse all his statements, yet we desire to give him due credit for the great ability which he has shown in the advocacy of his views. As to forceps, among the great variety at present at our disposal, he strongly favors the Davis instrument.

As to position, he is not in accord with British authors, but prefers the dorsal. Most obstetricians on the continent, and in America, will agree with the author in this particular. He holds a very decided opinion that the forceps should be applied to the sides of the child's head, and describes in a very lucid way the proper methods of making such application.

In the high operation, he recognizes the difficulty of making traction in the right direction; and, while he gives some credit to Tarnier for his intelligent recognition of this fact, he thinks that the instrument known as Tarnier's Axis Traction forceps is an unnecessarily ingenious contrivance, because, as he says, we possess in the ordinary forceps all that is necessary if we will use them correctly, and describes his device, which is fairly well known to the profession. Dr. Landis' method is fairly good, particularly in the hands of an experienced obstetrician, but we have no doubt that the use of our modern axis traction instruments will be much more safe, and much more effective, when the head is at the inlet.

The editor, Dr. Bushong, has added an interesting chapter supporting, in a general way, the views of Dr. Landis, and also gives a description of the operation of symphysiotomy, pointing out the indications and the risks connected therewith. It is not the sort of a book that is likely to become popular with students, but it is a very admirable work in its way, and one that we can recommend with confidence to all who are engaged in general practice.

Medical Items.

SUCCESSFUL CANDIDATES AT SPRING EXAMINATIONS IN MEDICINE.

UNIVERSITY OF TORONTO.

The following* fifty-six gentlemen, having completed their course of study and successfully passed the necessary examination, will receive the degree of M.B. :

T. Agnew, W. H. Alexander, W. A. Ball, J. Becket, W. L. Coulthard, G. M. Ferris, L. O. Fiset, E. B. Fisher, A. E. Gardner, E. D. Graham, G. B. Gray, W. A. Hackett, R. G. Laycock, K. C. McIlwraith, J. W. McIntosh, H. McLaren, J. Park, G. D. Porter, H. H. Sinclair, F. W. Smith, J. Stenhouse, W. Stephen, F. W. Stockton, T. Wickett, H. L. Reazin, D. J. Armour, W. B. Boyd, J. Bull, B. Campbell, F. Coleman, W. E. Cram, J. Crawford, J. D. Curtis, H. A. Cuthbertson, J. W. Ford, A. Galloway, A. B. Greenwood, H. Guelph, N. M. Harris, R. H. Hastings, T. C. Hodgson, H. A. Johnston, A. H. Jones, J. A. Lawson, R. M. Lipsey, D. A. McClenahan, W. J. McCollum, J. F. McKee, J. R. Mencke, H. N. Rutledge, J. P. Sinclair, C. E. Smyth, N. C. Wallace, R. B. Wells, J. A. White, T. H. Whitelaw.

Medals.—Faculty gold medal, W. J. McCollum ; first faculty silver medal, H. N. Rutledge ; second faculty silver medal, W. E. Crain ; third faculty silver medal, H. A. Johnston.

Scholarships.—Third year—First and second scholarships divided between M. Currie and A. K. Merritt ; second year—first and second scholarships divided between W. Goldie and E. L. Roberts ; first year—first scholarship, J. H. Elliott ; second scholarship, A. H. Addy.

George Brown memorial scholarship in medical science—in order of merit—W. E. Crain, C. E. Smyth, J. D. Curtis, R. B. Wells, W. J. McCollum, J. Bull.

Of the third year, 38 passed, 1 starred. Primary, 2 passed, 5 failed. Second year, 54 passed, 4 starred, 11 failed. First year, 54 passed, 9 starred, 6 failed.

QUEEN'S UNIVERSITY, KINGSTON.

The following passed for the M.D. and C.M. degrees :

James Ross Allin, William J. Anderson, Jos. A. Boucher, W. T. Connell, F. J. Farley, G. D. Fitzgerald, Cyril Fulton, P. J. Kinsley, B. J. Leahy, J. W. Morden, A. R. Myers, F. C. McCutcheon, A. B. Partou, W. W. Sands, James Seager, J. A. Stevenson, H. G. Williams, W. A. Young.

University Medals—Gold, Walter T. Connell ; silver, J. W. Morden.

MANITOBA MEDICAL COLLEGE, WINNIPEG.

M.D.—J. N. Andrew, F. W. E. Burnham, F. G. Brien, George Camsell, J. S. Conklin, E. A. Cokat, S. J. Elkin, J. R. Gunne, Robert Goodwin, John Gahan, J. K. McLennan, Don. McDonald, H. C. Norquay, William Stevenson, J. S. Stewart, A. E. Versailles, C. M. Vanstone.

C.M.—F. G. Brien, F. W. E. Burnham, J. S. Conklin, E. A. Cokat, George Camsell, S. J. Elkin, John Gahan, Robert Goodwin, J. R. Gunne, Don. McDonald, J. K. McLennan, William Stevenson, C. M. Vanstone.

Scholarships.—Intermediate—A. Hamman, \$80; J. A. Watson, \$60; H. P. Hargrave, \$40; A. S. Munro, \$100; J. R. McCrae, \$80; G. E. Curtis, \$60.

WESTERN UNIVERSITY, LONDON.

M.D.—C. F. New, J. Hughes, H. J. Ferguson, C. A. Elliott, A. F. Franklin, J. D. McLean, D. M. Dunn, D. McBlain, H. Stevenson, J. C. Forsyth, W. Northrup, D. M. Kelly, A. J. Peel, B. F. Leys.

HALIFAX MEDICAL COLLEGE.

M.D., C.M.—Annie Isabel Hamilton, Arthur A. Dechman, Wm. F. Cogswell.

TRINITY MEDICAL COLLEGE.

Final Fellowship Degrees.—Certificates of Honor—Candidates who obtained 75 per cent. and over: Prosper D. White, T. G. Devitt, Geo. H. Field, James Semple, A. K. Ferguson, C. B. Shuttleworth, A. L. Danard, H. R. Frank, Thos. Kerr.

Sixty per cent. and over.—T. M. Manes, C. D. Parfitt, C. C. Field, J. McMaster (B.A.), E. L. Procter, J. L. Bradley, W. H. Millen, H. E. Armstrong, J. T. Somerville, H. D. Livingstone, W. W. McQueen, S. H. Murphy (B.A.), M. S. Lane.

Passed.—D. Thomson, R. R. MacFarlane, C. H. Thomas, C. M. Kingstone, A. G. Ashton Fletcher.

Dr. Sheard's prize in physiology for the first year—J. S. McEachern.

Scholarships.—The 1st First Year's Scholarship, \$50, J. S. McEachern; the 2nd First Year's Scholarship, \$30, C. A. Campbell; the 3rd First Year's Scholarship, \$20, F. A. Scott; the 1st Second Year's Scholarship, \$50, J. R. McRae; the 2nd Second Year's Scholarship, \$30, V. A. Hart.

Medals.—The Second Trinity Silver Medal, Geo. Henry Field; the First Trinity Silver Medal, Thos. G. Devitt; the Trinity Gold Medal, P. D. White.

TRINITY UNIVERSITY.

M.D. C.M.—*Class I.*—Gold medal and certificate of honor, C. B. Shuttleworth; silver medal and certificate of honor, C. D. Parfitt.

Certificates of Honor.—A. L. Danard, A. K. Ferguson, *eq.*; H. R. Frank, S. H. Field, T. G. Devitt, J. S. Goodfellow, E. L. Procter, *eq.*; J. L. Bradley, C. C. Field. *Class I.*—T. Kerr, J. McMaster, J. Semple, *eq.*; H. E. Armstrong, J. D. Windell, H. N. Rutledge, *eq.*; J. R. Mencke, W. H. Millen, M. Baker, H. D. Livingstone. *Class II.*—S. H. Murphy, C. H. Thomas, M. S. Lane, J. D. Leith, T. C. Hodgson, D. A. McClenahan, W. H. Scott, J. Park, J. T. Somerville, F. W. Smith, C. M. Kingstone, P. D. White, E. R. Brown, F. A. White, A. Galloway, T. Agnew, W. W. McQueen, J. S. Matheson, E. D. Graham, A. G. A. Fletcher, T. A. Manes. *Class III.*—H. H. Sinclair, Miss J. S. Shirra, G. M. Ferris, W. B. Boyd, Miss N. Rodger, D. Thomson, R. R. Macfarlane, W. H. Alexander, S. N. Insley, Miss G. W. Hulet, T. Wickett, T. W. H. Young, F. S. Nicholson, W. J. Bray, Miss E. A. A. Burt, W. A. Ball, W. W. Bredin (M.B., 1873).

M'GILL UNIVERSITY.

Final Examination for M.D., C.M.—A. T. Bazin, W. G. M. Byers, A. R. Colvin, A. Davidson, R. E. Davis, W. F. Drysdale, A. S. Estey, J. W. Evans, W. Ferguson, E. S. Fowler, F. M. Fry, B.A., J. A. Fulton, C. W. F. Gorrell, G. Hamilton, J. P. Hanington, E. C. Hart, W. Henderson, W. G. Hepworth, P. A. Holahan, B.A., H. M. Jacques, J. F. Kearns, H. McL. Kinghorn, B.A., W. O. Lamly, J. F. Lewis, G. S. MacCarthy, J. McCrae, J. T. McLaren, J. A. McLaughlin, C. M. McLean, L. Y. McIntosh, L. F. McKenzie, G. H. Manchester, G. H. Mathewson, B.A., W. Mitchell, A. C. Nicholls, M.A., E. J. O'Connor, C. L. Ogden, B.A., J. Pritchard, B.A., J. Reeves, A. Richardson, H. J. Richardson, F. E. Rimer, A. A. Robertson, B.A., D. W. Ross, H. Ross, J. J. Ross, J. H. Scammell, W. H. Scott, E. M. Sharpe, H. S. Shaw, A. T. Shillington, W. A. Stenning, R. D. Wilson, G. G. L. Wolf, B.A., H. E. York.

Honors, Medals, and Prizes.—The Holmes Medal, Andrew Armour Robertson. The Final Prize, Albert George Nicholls, M.A. The Primary Prize, William Nassau Kendrick. The Sutherland Medal, Dougall Robins, B.A. The Clemesha Prize, Allan Davidson.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF ONTARIO—PRIMARY PASSED.

Following is a list of candidates who have passed the primary examination of the College of Physicians and Surgeons of Ontario :

Passed with honors.—E. L. Roberts, Lynedoch, Ont.

Passed.—W. L. Addison, Toronto; W. H. Alexander, Bolton; E. H. Arkell, St. Thomas; D. Buchanan, Galt; G. S. Burt, Hillsburg; J. F. Boyle, Toronto; T. H. Bier, Brantford; T. C. Bedell, Hillier; G. W. Brown, Aylmer West; W. J. Beasley, Weston; W. G. N. Byers, Gananoque; B. G. Connolly, Trenton; G. E. Cook, Morrisburg; D. T. Crawford, Thedford; H. Clare, Chapman; Jennie Drennan, Kingston; W. F. Drysdale, Perth; J. J. Elliott, Brantford; J. H. Ferguson, Toronto; T. H. Farrell, Kingston; W. Goldie, Ayr; J. S. Goodfellow, Bradford; C. Graef, Clifford; F. W. Hodgins, Lucan; L. Hogg, London; W. Hird, Uxbridge; G. V. Harcourt, Port Hope; E. S. Hicks, Port Dover; W. J. Henderson, Little Britain; C. G. Johnson, Athens; W. W. Jones, Mount Forest; W. D. Keith, Toronto; L. Lawrason, Dundas; J. S. Morris, Oshawa; J. D. MacLean, Meaford; H. G. S. Murray, Kingston; R. Moore, Maple; G. Musson, Toronto; Maggie MacCallum, Toronto; A. H. Macklin, Stratford; George More, Kirkton; G. E. Millichamp, Toronto; W. J. Malloch, Meaford; H. W. Miller, Orillia; W. McDonald, Galt; A. S. McCaig, Collingwood; J. R. McKee, Lochalsh; H. S. McDonald, Kingston; W. B. McKechnie, Aberdour; P. S. McLaren, Tiverton; N. W. McInnes, Vittoria; J. M. McCarter, Almonte; D. W. McPherson, Toronto; C. S. McKee, Peterborough; W. H. Nichol, Brantford; J. H. Oliver, Sunderland; J. I. Pratt, Heathcote; A. W. Partridge, Crown Hill; H. G. Pickard, Glamis; A. B. Parlow, Iroquois; J. Pritchard, North Wakefield, Quebec; E. K. Richardson, Flesherton; H. H. Ross, Brucefield; F. S. Roundthwaite, Collingwood; E. L. Robinson, Toronto; J. W. Routledge, Lambeth; J. A. Rannie, Chatham; A. Rupert, New Hamburg; J. P. Russell, Toronto; J. Reeves, Eganville; A. A. Small, Toronto; Emma Skinner, Davisville; Maggie Symington, Brighton; I. G. Smith, Belleville; C. R. Sneath, Toronto; D. W. Shier, Cannington; Christian Sinclair, Ottawa; R. W. Shaw, Lotus; W. J. Stevenson, London; F. W. Smith, Sheffield; J. S. Thorne, Belleville; J. E. Tyndall, Richmond Hill; W. M. Teetzel, St. Thomas; H. E. Tremayne, Mimico; Adelaide Turner, Gananoque; Annie Verth, York; H. E. Wallace, Port Elgin; E. B. White, Chatham; S. H. Westman, Toronto; W. H. Weir, Brantford; E. C. Weekes, Glencoe; B. E. Webster, Kingston; F. G. Wallbridge, Belleville.

ENTITLED TO LICENSE.

The following candidates have passed the final examination, and are therefore entitled to the license in Ontario :

Passed with honors.—W. T. Cornell, Spencerville.

Passed.—W. H. Alexander, Bolton; H. E. Armstrong, Orono; T. Agnew, Belgrave; W. J. Anderson, Shanley; J. R. Allen, Napanee; D. J. Armour, Cobourg; W. B. Boyd, Uxbridge; J. H. Bull, Weston; J. L. Bradley, Airlie; H. A. Cuthbertson, Wyoming; W. E. Crain, Brockville; J. Crawford, Toronto; B. Campbell, Parkhill; J. D. Curtis, Middlesbrough; Frank Coleman, Hamilton; A. L. Danard, Allenford; T. G. Devitt, Bobcaygeon; T. S. Farncomb, Newcastle; J. W. Ford, Woodham; F. J. Farley, Smithfield; A. K. Fergusson, Kirkton; G. H. Field, Cobourg; C. C. Field, Cobourg; H. R. Frank, Brantford; A. G. A. Fletcher, Toronto; A. B. Greenwood, Newmarket; E. D. Graham, Sutton West; G. B. Gray, Elora; A. Galloway, Beaverton; R. J. Hastings, Guelph; D. H. Hogg, London; N. W. Harris, Toronto; T. C. Hodgson, Beaverton; Gertrude Hulet, Norwich; F. W. Hughes, London; W. A. Hackett, Belfast; C. M. Kingston, West Huntingdon; J. A. Lawson, Brampton; R. M. Lipsey, St. Thomas; J. D. Leith, Dronmore; H. D. Livingstone, Georgetown; W. H. Miller, Cottam; F. W. Morden, Picton; S. H. Murphy, Renfrew; J. R. Mencke, Toronto; C. S. MacCarthy, Ottawa; D. A. McClenahan, Tansley; J. McMaster, Toronto; J. W. McIntosh, Toronto; L. Y. McIntosh, Strathmore; W. J. McCollum, Toronto; J. F. McKee, Aurora; A. A. McCrimmon, St. Thomas; C. F. New, London; E. L. Procter, Toronto; G. D. Porter, Brantford; J. Park, Feversham; C. D. Parfitt, London; J. Pritchard, North Wakefield, Quebec; A. B. Parlow, Iroquois; H. N. Rutledge, Streetsville; J. P. Russell, Toronto; J. Reeves, Eganville; C. E. Smyth, Toronto; W. Stephen, Anderson; F. W. Smith, Sheffield; C. B. Shuttleworth, Toronto; J. Seager, Ottawa; J. P. Sinclair, Toronto; R. B. Wells, Toronto; T. H. Whitelaw, Guelph; N. C. Wallace, Alma; J. D. Windell, Pontypool; J. A. White, Oakwood; P. D. White, Glencoe; T. Wickett, Belleville.

THE CANADIAN PRACTITIONER

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[No. 7

Original Communications.

A CASE OF CHOLECYSTOTOMY FOR OBSTRUCTIVE JAUNDICE.*

BY DR. R. WHITEMAN,
SHAKESPEARE, ONT.

D. R., æt. 54, a tall, spare man with black hair and dark complexion, called at my office, October 17th, 1892, complaining of indigestion and general weakness. I was out at the time, so he was prescribed for by Dr. Smuck, of Binbrook, then a student at my office. On the 22nd he returned feeling worse, having been out in a heavy rain and caught a severe cold in the meantime. Pulse, 54; tongue coated; conjunctiva yellow; bowels constipated; skin slightly yellow and very itchy; in fact, a well-marked case, apparently, of catarrhal jaundice. There was no tenderness over the liver or gall bladder, and no history of gallstone.

*Read before the Ontario Medical Association, June 7th, 1894.

October 27. Visiting another member of the family, I saw him in the orchard, on a cold, windy day, picking apples. I went over to see him and warn him against taking such risks. He was more jaundiced than before, but said he felt better when out, and that it was the best relief he got from the itching.

Nov. 4. I was called to see him, and found him intensely jaundiced, very dull, semi-comatose. Gave a hypodermic injection of gr. 1-6 pilocarpine, which caused profuse sweating, and was followed by relief. On rubbing him dry, the towel was colored dark-green by the perspiration.

Oct. 9. Advised a consultation, and Dr. D. B. Fraser, of Stratford, was called. We could find no enlargement of liver or gall bladder. Patient very weak, and somewhat comatose. The diagnosis agreed upon was obstruction of bile ducts. The causes, gallstones, catarrh, carcinoma, tumors, etc., were discussed. Owing to absence of pain, and the fact that the jaundice appeared to be brought on by a wetting, we inclined to consider it a case of catarrhal jaundice.

He was kept on a liquid diet and stimulants, giving hypodermics of pilocarpine as occasion required. For a time they gave relief. Enemata of Glauber's salts and magnesium sulphate were given to relieve constipation. Stools, light-colored, containing no bile; while urine was dark-colored and reacted freely to bile tests.

The pilocarpine worked well, and was given almost daily for about ten days, when suddenly it produced so much weakness that he would not have it any more. After its withdrawal jaundice deepened, skin getting very dark and coma more persistent.

I now arranged a steam bath as follows: Taking a large tub, I placed a chair in it; put a warm stove-lid, wrapped in newspapers, beside the tub for patient's feet to rest on; poured three pailfuls of boiling water into the tub. Then, stripping the patient naked, placed him on the chair, with his feet on the stove-lid, and wrapped a cotton sheet around his body and the tub, pinning it closely around his neck. In about ten or fifteen minutes he was perspiring freely, and, as soon as he began to feel weak, I replaced him and the steaming sheet in bed, wrapping well in warm flannels. As perspiration ceased, I had him rubbed dry, and dry clothes put on. This always gave temporary relief. The perspiration was profuse, and any clothes saturated with it were stained a dark-green color, and this was continued every day or two till the operation.

Between Christmas and January 1st, I began to make out the outlines of what I took for an enlarged gall bladder. The patient complained of a feeling of tightness in the same region.

Jan. 3, 1894. Dr. Fraser was again called for consultation, and diagnosis of enlarged gall bladder was confirmed, and it was decided to

try ox-gall pills, malt extract, peptonized food, etc. Still no bile ever appeared in the stools, and the patient kept steadily, though slowly, emaciating.

I proposed cholecystotomy as an expedient that would remove jaundice and itching, and give time to get rid of or overcome, if possible, the obstruction.

Before operating, it was decided to call Dr. J. E. Graham, of Toronto, and, on February 28th, Drs. Graham and Fraser saw him with me.

After careful examination, Dr. Graham confirmed our diagnosis of enlarged gall bladder, inclining to the opinion that the obstruction was malignant, but, possibly, a large, smooth stone blocking the common duct, the chief argument against stone being the entire absence of bile in the stools, as some bile is apt to find its way past a stone.

The proposal to operate was submitted to Dr. Graham, and he advised it.

The whole matter having been explained to the patient, and his consent obtained, I arranged to operate on March 6th, assisted by Drs. D. B. Fraser, Stratford ; Minchin, Berlin ; McGillivray, Wellesley.

The operation lasted about two hours. An incision about five inches long was made parallel to and about an inch below the lower border of the right ribs, carried through the skin muscles and down to the transversalis fascia. Then, carefully picking up, first, the fascia, and cutting it, I came upon the peritoneum, which I picked up, opened carefully, and ran in a director, upon which I made an incision three inches long, exposing the enlarged gall bladder. This I secured by passing into its wall two strong silk threads, drawing it well into the opening, and thrusting a large trocar and cannula into it between the threads. On withdrawing the trocar about one and a half pints of dark-green tenacious fluid ran out. I washed out the gall bladder, enlarged the opening in it to about two inches long, searched carefully with the finger, then with the probe, for cause of obstruction. I examined also the duodenum gall ducts and pancreas for cause of obstruction, but could not find either a stone or nodular mass such as we would expect to find with a malignant growth. Could not pass probe into the duodenum. As patient was very weak, I was obliged to hasten the close of the operation, which I did by sewing the peritoneal covering of the gall bladder to that of the abdominal wall, and next the orifice in the gall bladder to the skin.

The bile flowed freely during the operation, and I had difficulty in preventing its escape into the peritoneum. Having completed the operation, I inserted a Spencer-Wells ovariectomy tube, and put over it an anti-septic absorbent dressing.

He rallied nicely, and passed a good night. Next morning, on my return, I found him bathed in bile, the whole dressings saturated, and his

shirt and bed wet. Pulse, 78; temperature, 98.5°. Itching but very little. I removed the Spencer-Wells tube, and inserted a long rubber tube of about the same calibre, and long enough for its distal end to go into a round-shouldered eight-ounce bottle, the neck of which I tied to a bandage round his waist. In a few days I got this to work satisfactorily, so that all the bile was caught, and he was kept dry, and from March 11th the quantity secreted every twenty-four hours was measured. On that day it was one quart.

March 12. Pulse, 80; temperature, 98°; bile, 35 ozs.; specific gravity, 1011. Digestion gave considerable trouble, as before. Liquid nourishment continued, as no bile entered the bowel. Occasionally, he would have appetite for solid food, but felt distressed after eating it.

March 20. Pulse, 68; temperature, 97°; bile, 41 ozs. Yesterday ate freely of potatoes and fish, after which he did not feel so well; distressed with sour stomach. Gave hydrarg. subchlor., grs. v.; sodæ bicarb., grs. xx.; pulv. rhei., grs. x.

March 21. Bile deeper colored, but less in amount, being 29 ozs. Vomited; thinks the powders did it, but felt better as it worked off.

March 23. Looks, eats, and feels well. I tried again to pass a Sayre's flexible probe. It went two and a half inches along the gall bladder, then turned downwards and inwards three and a half inches more. I also attempted to force water into the duct until it gave pain in the liver, but none appeared to enter the bowel. The stools, when he did not take iron, were clay colored, without a trace of bile. The urine lost its deep yellow color, but still occasionally gave bile reaction.

Skin became normal in color. Itching ceased. I watched carefully the effects of drugs given, though I did not give any for experiment. I found calomel useful in removing undigested material from the bowels, but the quantity of bile passed in twenty-four hours rather diminished than increased by it. In fact, it was about the only drug that did appear to diminish the quantity of bile, while the urine became clearer. I did not use it often, for fear of salivating him, though it gave no signs of doing so. He suffered much from fermentative indigestion, owing to our not having the antiseptic action of the bile in the bowels. I tried sodium salicylate for this purpose, and soon found the amount of bile greatly increased; so I discontinued it, and used bismuth salicylate instead.

April 25. Pulse, 85; bile, 20 ozs.; urine, 40 ozs.; specific gravity, 1020. Gave sodium salicylate, grs. x., every two hours.

April 27. Pulse, 80; bile, 35½ ozs.; urine, 22 ozs.; specific gravity, 1020.

One fact appeared too often to be a mere coincidence: as bile increased, urine diminished, and the contrary. The patient always felt best when the quantity of bile was least.

This would appear to throw some light on a matter I had noticed in cases of sick, hysterical, or bilious headaches. Many patients have told me that they have scanty, high-colored urine as the attack is coming on, passing large quantities of pale urine as it passes off, the attack appearing to be due to a too free production of bile; which becoming inhibited, urine flows freely, and the headache ceases. An intelligent gentleman, formerly a martyr to sick headache, lately informed me that he can now always check it by drinking freely of water.

Landois, a German authority, gives the specific gravity of bile as 1026 to 1032, but from a fistula 1010 to 1011. In this case it varied from 1010 to 1012.

April 30. Slept well; awoke refreshed. Took porridge, followed by some mutton soup. Soon after felt heavy. Had enema of turpentine made into emulsion with egg and milk. About 10 a.m. felt cold, and took a severe chill, followed by temperature 100°, pulse 96. This was the first rise of temperature. It was followed by severe sweating, after which pulse and temperature subsided.

Till May 7, comfortable. Took liquid food with relish, with preference for fat.

May 24. Appetite poor; felt bloated. Bile, 14½ ozs.; specific gravity, 1010; urine, 32¼ ozs.; specific gravity, 1020. Gave soda salicylate, grs. x., every two or three hours.

May 26. Bile, 30¾ ozs.; specific gravity, 1010; urine, 47 ozs.; specific gravity, 1018. Emaciated; lost all appetite for food, though small quantities did not distress him.

May 29th. Had severe chill, followed by low delirium. I saw him June 2nd for the last time. Pulse 84, compressible; temperature 96°. Delirious at times, and very weak. He died on the 3rd.

Post mortem, conducted by myself and Dr. Fraser, June 3rd, about twelve hours after death. Extreme emaciation. Subcutaneous fat absent. Omentum dark-green color. Intestines dark-colored, adherent, and semi-gangrenous in appearance. Duodenum and jejunum much enlarged; transverse diameter about three inches. There were adhesions at lower part of the enlargement, but they did not appear sufficient to account for the dilatation. Liver dark-colored and small. Decomposition advanced. Gall bladder shrivelled to a small tube 2½ inches long. Hepatic duct enlarged to diameter of half an inch. As it joined the common duct there was inside of it a small, hard nodule, which, however, allowed fluid to pass. The common duct had a diameter, when spread out, of a little over one inch. At its entrance into the duodenum there was an area of thickened and infiltrated intestine. This infiltrated area was about two inches in diameter each way, compressing and completely

stopping the lower orifice of the duct, so that we could neither pass a probe nor force water through it. Dr. Fraser took some of the infiltrated tissue and some of the nodules for microscopical examination, and found them to be epitheliomatous, though in this case the impairment of health and death were due, not to the malignant disease *per se*, but to its mechanical interference with physiological functions. The pancreas entered the duodenum by a separate duct, and was in no way involved.

The following are amounts of bile discharged each day from the time we were able to obtain it all so as to measure correctly:

DAY.	MARCH.		APRIL.		MAY.	
	OUNCES OF BILE.	OUNCES OF URINE.	OUNCES OF BILE.	OUNCES OF URINE.	OUNCES OF BILE.	OUNCES OF URINE.
1	.....	.....	41½	.....	18½	40
2	.....	.....	41½	.....	26½	26
3	.....	.....	42½	.....	40	20½
4	.....	.....	38	.....	60	18½
5	.....	.....	44½	.....	63½	25½
6	.....	.....	42½	.....	77	14½
7	.....	.....	38	.....	42	17
8	.....	.....	44½	.....	88	16½
9	.....	.....	45	.....	69	18½
10	.....	.....	52½	.....	53	17
11	20	.....	46½	.....	33	18
12	35	.....	37	.....	55	27
13	37½	.....	46½	.....	77	38
14	35½	.....	45	.....	69	16½
15	36	.....	48	.....	60½	23½
16	34½	.....	46	.....	60½	23
17	31	.....	58	.....	58½	20
18	30	.....	59	.....	29½	15½
19	37½	.....	55½	.....	24½	16
20	41	.....	46½	.....	22½	31½
21	29	.....	50	.....	26½	63
22	30	.....	39½	.....	27	62½
23	36	.....	29	30	25	42
24	38	.....	26	22	26½	35
25	42½	.....	20	40	14½	32½
26	42	.....	23	36	30½	47
27	43	.....	35½	22	32½	15
28	36	.....	38	19½	25½	25½
29	38	.....	47	17½	47½	16½
30	37	.....	27½	21½	23	12½
31	43½	.....	.....	.....	25½	Urine not collected

SOME PHASES IN THE MANAGEMENT OF CONSUMPTION.*

BY E. HERBERT ADAMS, M.D., L.D.S.,
TORONTO.

THE number of new remedies for the relief and cure of consumption that have been brought forward in the last few years is legion. To discuss the merits of each remedy, or even of the most important of them, is not within the scope of this paper. Rather let me take up your time for a few minutes with a discussion of some of the fundamental laws in connection with the cure of the disease, without the observance of which medicinal agents will not only fail in their object, but often prove positively harmful.

In the first place, it may be laid down as an axiom that any remedy which interferes with the appetite or digestion, and consequent nutrition, of the patient must be looked on with caution, no matter how great its theoretical or apparent beneficial results. The patient will improve so long as his nutrition improves, and no longer. And yet how often is this essential law broken. How often are creasote, arsenic, cod liver oil, strong stomachics, alcoholics, and other vaunted specifics given *ad nauseum*, and without considering their effect on the patient's appetite or digestion.

It is true that, of late, hypodermic medication has to some extent superseded the internal use of these drugs, and now, forsooth, we inject under the patient's skin pure beechwood creasote until the patient's system is thoroughly saturated, and he can taste creasote in his mouth, and it can be found in the secretions, or until, as I saw in one case, an embolism occurred, and sudden death ended the experiment; or perhaps it is Liebreich's remedy, cantharidate of potash, that is used as an injection, and, while the patient's laryngeal or pulmonary symptoms appear to improve, large painful lumps on the skin in increasing numbers indicate the place of injection, and in many cases, as I have demonstrated, albumen in the urine shows signs of a beginning nephritis, due to the irritative action of the remedial (?) agent on the kidneys. Indeed, we cannot be

* Read before the Ontario Medical Association.

too careful in the hypodermic use of such drugs, for while we may be destroying or eliminating the tubercle bacilli, we may be doing infinitely more harm to some portion of the system. It is true that temporary beneficial results have occurred with these two remedies, but in my experience it is not limited ; patients so treated rarely eventually recovered.

The curative effects of cod liver oil have been much overestimated and extolled. It is merely an easily digested fatty food, and in some cases not even that, for it sometimes interferes both with the patient's appetite and digestion.

Many patients who will not take cod liver oil without nausea and without spoiling their appetite for their meal can yet be got to take with a relish ten times the amount of fatty nourishment in the form of cream or good fresh butter, and they obtain this extra nourishment, too, at a lessened expense.

Many physicians who are obtaining some of the best results to-day in the cure of consumption never prescribe cod liver oil in their practice.

Use cod liver oil, by all means, in your practice, if you like ; it is often a good food, but don't delude yourself or your patient into thinking it a specific.

All disorders of the digestive apparatus should be cured as soon as possible, and the mouth and teeth put in good condition.

Constipation, if present, should be relieved by a laxative diet, or very mild laxative pills, as constipation interferes both with appetite and digestion.

The patient's appetite must be improved. This is best accomplished by natural methods, such as pure, bracing air, bathing, exercise, cheerful company, etc., rather than by drugs. Climate and change of air and scene are here of importance, for a patient's appetite and nutrition will often improve without other assistance on removal to a more balmy or bracing clime, or, above all, to a place where he can be in the open air for a portion of the day.

A dry, warm climate and an altitude of about 2,000 feet seem most suitable, perhaps, for most cases of consumption. Any climate, whether moist or dry, where the patient's appetite and nutrition are improved, and continue to improve, is a suitable climate for that particular case. Thus it is that a sea voyage, where the humidity of the atmosphere is always great, is productive of good results in many cases. It is a mistake to think that patients cannot do well in Ontario. They can and do get well here, and often as speedily as they could have done anywhere else. One of the main objections to Toronto for consumptives, in winter, is the heating of the houses, and the enforced stay indoors. Hot-air furnaces are an abomi-

nation, as far as their effects on the production and cure of this disease are concerned. A warm-air furnace would, perhaps, be all right, but the majority of warm-air furnaces, so called, are hot-air furnaces, and, as a rule, this so-called warm air registers several hundred degrees, does not contain the proper amount of moisture, and is dry, dusty, and irritating, rendering individuals liable to cold and catarrhal diseases on going out of doors. In many cases, too, the fresh-air shaft is closed, and the same air is heated over and over again. Water and steam heating appliances are better, while the open fire grate is very useful. It is a common mistake to imagine that a consumptive takes cold much more readily than a healthy person. A consumptive who has fever can, in reality, stand the cold better than another person, and it is a common thing, at special sanatoria, to see consumptive fever patients, warmly wrapped, reclining on steamer chairs for a portion of the day, on the piazzas, even during the snows of winter, and with good results.

Climatic treatment aims, therefore, at removing the patient from those climatic conditions which predispose to bronchial and pulmonary inflammation, and hence to consumption; to remove the patient from a climate which induces an indoor and sedentary life to one where an outdoor life can be enjoyed without interference from meteorological conditions; to remove the patient from all depressing influences due to climate or unsanitary conditions, dampness of soil, etc., to a climate where change of air, diet, scenery, and daily routine proves sufficient to improve the appetite and nutrition and general spirits, and to eradicate habits which have assisted in lowering the vitality and rendering the system susceptible to the inroads of disease.

The management of the patient is a chief essential in the cure of the disease. There must be a constant supervision of his habits, movements, and inclinations. The consumptive must, in fact, be managed by his physician almost as a father would manage his child. Very few patients have either the will or knowledge of how to properly conduct the management of their own habits. If they did they would, probably, never have contracted the disease, or, rather, it would rarely have advanced to a serious stage.

In special resorts for consumptives, if the patient is not in a sanitarium and thus seen and watched every day, he is generally seen by his physician two or three times a week, and examined every week or fortnight, and it is natural for a patient, if he wishes to go to a concert, or even if he wants to go for a walk or a drive, to consult his physician.

If there is a hemorrhage of the lungs or a tendency to hemorrhage, the patient should be kept absolutely at rest in bed. Hemorrhage may, as a rule, be checked or prevented in this way alone. The slightest tinge of

red in the sputa indicates rest in bed, and enforced quiet till such symptoms disappear.

The loss of blood from hemorrhages, which could have been prevented, often throws the patient back for weeks or months, or even prevents any previous chances he may have had for recuperation.

More is to be gained by preventing hemorrhages than in checking the hemorrhage after it occurs.

This can only be done by having the patient under constant supervision after the disease has been once detected by physical and microscopical examination. It is not my intention to go into the special methods for the arrest of hemorrhage—these are well known to you all—but merely to emphasize the importance and practicability of the prevention of hemorrhage.

If there is fever, the patient should always be tested with the clinical thermometer; rest in bed, or in a reclining position, should be enjoined during that portion of the day when the fever is at its height, and no physical or mental exertion should be allowed when the temperature is above 100°. The heaviest meal should be taken at that time of the day (and this is generally the morning) when there is least fever. Even slight exercise on a heavy meal will often raise the temperature of a phthisical patient one or more degrees. Besides, a patient cannot digest his food as well, or stand fatigue as well, during the febrile state. By rest alone the temperature can often be brought down to the normal.

A common error is to recommend the consumptive to go to the mountains, live in the open air, take lots of exercise, spend most of the time in the saddle, etc., and never bother about a physician. This is suicide in many cases for the patient, as the over-exertion in this way often increases an already high febrile state, or brings on a sudden and possibly severe hemorrhage from an already weakened vessel, which throws the patient's recovery back for months, and it may be forever. Exercise of such kind should always be under the advice and guidance of a physician. Over-exertion in any way should be avoided. "Others may get tired and rest; *the consumptive must rest before he gets tired.*"

So many physicians tell their patients that outdoor exercise, and lots of it, is their only chance for life that it is not surprising, though truly pitiful, to see such patients literally drag themselves about, exhausting what little strength or recuperative power they may still possess.

The consumptive should be carefully and sedulously guarded against the contraction of other diseases, such as typhoid, pneumonia, malaria, la grippe, colds, etc. Diseases from which an ordinary healthy person will speedily and entirely recover will leave the consumptive a prey, in his weakened condition, to a more rapid progress of his tubercular trouble.

Even slight illness should be treated immediately, and not allowed to progress. This is another reason why patients should be under constant medical supervision, and where can this be obtained properly except in a special institution?

Importance of early diagnosis. In every case, as soon as a diagnosis has been made by physical or microscopical examination, and the latter should never be neglected when there is any expectoration, the patient, or one of his relatives or friends, should be told the real and serious nature of the disease, at the same time impressing on them the fact that the disease is usually curable in its earlier stages under proper treatment. From this time onward, till the disappearance of all symptoms of the disease, the patient should be under the guidance of a physician both as to habits, diet, and general mode of life. If, despite all skill and management, the patient does not improve, a change of climate or physician should be recommended before the disease has made much further progress. In all cases where there is chronic fever or tendency to hemorrhage, or loss of weight, it is advisable for the patient to quit work entirely.

It is a great and common mistake, through false kindness, not to tell the patient the real nature of the disease as soon as you yourself are positive. The disease is so slow and insidious that the patient himself rarely believes he has the disease until hemorrhages, night sweats, and other marked symptoms enforce it on his attention. Many patients could have been cured if they had been told the real nature of their disease in time, for they would then have quit work and given nature a fair chance to cure. I remember one patient, a prominent wealthy lawyer in the south, who for six months after I saw him never had a daily maximum temperature less than 103°. His temperature for from three to six months previous must have been as great or greater, and yet until I first saw him he had been actively engaged in his legal practice (and he had one of the largest legal practices in the south), and he had never taken a day off from his work, nor was he advised to take a rest by his medical adviser. When first examined by me both lungs were affected, and his sputa was constantly loaded with bacilli. If his physician had told him the nature of his disease earlier he would have stopped work and given his attention to the cure of his disease, and, judging by his constitution and family history, would have had a good chance for recovery.

This is but one example of a great class of patients which come under the eye of a physician practising in a health resort for consumptives. My experience in such a resort, where consumptives flocked from all quarters for their health, was that three-fourths of them, though they had been under the supervision and treatment of their family physicians, had yet never early been informed of the serious nature of their disease, and had not quit work until they were in advanced stages of the disease.

My method, for several years past, has been to invariably tell the patient, or one of his friends, the real nature of his disease as soon as physical diagnosis or microscopical examination make it positive, and, at the same time, to tell them that they have a good chance for recovery, but that it is necessary to begin at once, under medical supervision.

The proper management of the tubercular patient, too, requires the services of a skilled expert, and more time and attention than the general practitioner can give.

In a large number of cases, too, the disease can be most successfully treated in a special institution, where the patient cannot only be under almost constant supervision and special treatment, but where the element of contagion from his dried sputa will not be a factor in the production of the disease in his friends or relatives.

My personal experience is that better results can often be obtained there than elsewhere, and that, properly conducted, there is no depressing influence from segregation, or, where such occurs, that it is more than counterbalanced by the other benefits of such institutions.

And now that we are on the question of a hospital for consumptives, I wish to ask a vital question. Is there in Ontario to-day one hospital or other institution where victims of pulmonary tuberculosis have every reasonable modern chance for the cure of the disease, and where non-tubercular patients are properly protected from danger of contagion from the tubercle bacillus?

Those who have studied this important question and looked thoroughly into the matter will fully appreciate, with me, the importance of the recent princely offer of Mr. W. J. Gage to the City of Toronto toward the establishment of a thorough modern consumptive hospital in High Park, and will join me in wishing Godspeed to the successful and early accomplishment of the object of Mr. Gage's wise and far-seeing philanthropy.

It will be (if the offer is accepted) the first institution of its kind in Canada, and one of the first in America, and, if properly conducted, it should prove not only a great boon to the consumptives of Ontario, and in the prevention of the spread of the disease here, but will also set an example which will shortly, let us hope, be followed in the majority of the large cities of both the new and the old world.

When such institutions become more common, the dawn of a better day for consumptives will be visible, and with it the setting sun of this dread disease, which, more than all others, has played wanton havoc with human life and happiness.

A CASE OF LUMBAR HERNIA.*

BY. F. N. G. STARR, M.B. (TOR.),

Senior Assistant Demonstrator of Anatomy, Toronto University.

Mr. President and Gentlemen :

THE patient that I present to you to-day is one of peculiar interest. He has in his right lumbar region a hernia, and, as you are aware, lumbar hernia is of rare occurrence. There is nothing of importance in his family or personal history, except that eighteen years ago he fell, while carrying a sack of grain upon his shoulder, and hurt his side ; and that he has had a violent cough on and off for fourteen years. From the fall he made a good recovery, and he does not think the "lump" appeared at that time, though he is not sure that it did not.

Twelve months ago, when stooping down, preparing to lift a weight, he was seized with a "stitch" in the side, which, for a few minutes, prevented him assuming the erect posture. After the severe pain had ceased he noticed a lump in his back, and it has persisted ever since. There is always a steady pain in the side, which sometimes becomes sharp, and, as he describes, "shoots into the backbone." After manipulation the other day he suffered from sharp pain shooting to the backbone, into the chest, and toward the shoulder.

The swelling of which he speaks, you will observe, is about the size of a duck's egg, its long axis being directed from above, downward, and outward, and is situated in the right lumbar region, between the lower border of the ribs and the crest of the ilium.

Upon examination you will find that it is slightly tender on pressure, elastic to the touch, readily reducible, and as it disappears into the abdominal cavity it conveys to the hand a crackling sensation. If the patient is made to strain, and then percussion is tried, the swelling gives a tympanitic note ; otherwise no resonance can be made out, partly, I think, because of the reducibility of the hernia.

I have had but little time to look up the literature of the subject, but so far have found reports of four cases. One by Cloquet,† occurring in a

* Read before the Ontario Medical Association.

†Chilim's System of Surgery, published 1847.

man aged seventy-five years, and coming on suddenly, while trying to lift a heavy weight. One, by Edmund Ower,* in a child five and a half years old, which came on after a lumbar abscess. Giardano† mentions the condition in a recent contribution on the study and cure of laparocoele, and last year Tucker‡ reported a case which occurred in a female. In his case the hernia was of enormous size, and upon operation the contents were found to consist of the stomach, the small intestines, the omentum, and a part of the colon. The whole mass was returned to the abdominal cavity through an opening just below the free border of the ribs, and running down to and along the crest of the ilium.

Treves§ says that a hernia in this region makes its appearance on the surface at the triangle of Petit (see Fig. 1), which, as you know, has for its boundaries the latissimus dorsi, behind, the obliquus externus abdominis in front, and the iliac crest below, having either passed through the quadratus lumborum muscle or through the transversalis aponeurosis, close to the

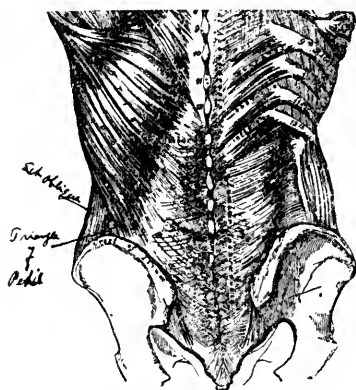


Fig. 1. (Gray) Showing muscles of the back, with triangle of Petit just above the crest of the ilium.

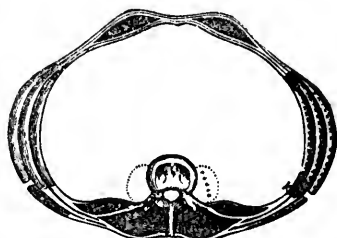


Fig. 2. (Gray) Transverse section of the abdomen in the lumbar region, showing at * where a lumbar hernia would appear on the surface.

outer edge of the quadratus lumborum, and then penetrated the obliquus internus abdominis, which forms the floor of Petit's triangle (see Fig. 2). The case before you seems to confirm this opinion.

A lumbar hernia has been, and may again be, mistaken for a lumbar abscess. Should such a supposed abscess be incised, the result might be disastrous. This is one of the reasons why I have presented this case here to-day, for it is too often true that we only see those things that we have been trained to observe.

You will notice that the patient has also a small hernia, about the size of a marble, two inches below the ensiform cartilage, between the abdominal recti muscles. This form of hernia is fairly frequent.

*British Medical Journal, May 5th, 1888.

†American Journal of Obstetrics, vol. xxvii.

‡———Naples.

§Annals of Surgery, vol. iii.

Selected Articles.

THE CONSERVATIVE TREATMENT OF THE FEMALE PELVIC ORGANS.*

BY WILLIAM GOODELL, M.D., LL.D.,

Honorary Professor of Gynecology in the University of Pennsylvania.

ALTHOUGH a co-referee, I have taken the liberty of changing the title of my paper to that of the "Conservative Treatment of the Female Pelvic Organs." This substitution of the more generic word *treatment* for the specific one of *surgery* does not, as will be seen, make me a traitor in the camp. But it enlarges the scope of the subject, and is more in keeping with my own views. For I hold that, besides strictly surgical ones, there are other kinds of conservative treatment which are especially adapted to the ailing organs of the female pelvis.

The question on which hinges the conservative treatment of the female pelvic organs is, What effect upon a woman has the removal of her appendages? Unquestionably, there usually follow the annoyances of the change of life. These, in my experience, are long spun out, because, when menstruation has been abruptly and artificially stopped, the change of life, especially in young women, takes a longer time to become fully established than when the menopause has been attained naturally. Consequently, months may elapse—nay, even years—before the victim of the operation escapes from the perspirations, the heat flashes, the skin tinglings, the numbness of the extremities, the nerve-stress, the nerve-storms, and all other vaso-motor disturbances which are so hard to bear.

Then, again, the unwelcome fact cannot be ignored that mental disturbances may be traced directly to the ablation of the ovaries. This is manifested by morbid broodings, by low spirits, by melancholy, by suicidal impulses, and even by insanity. Every ovariologist regretfully has met with such painful episodes in his practice. Glaevecke, who has made

*Read before the Congress of American Physicians and Surgeons, at Washington, D.C., May 31st, 1894.

extensive researches on this subject, goes so far as to say that "in almost all cases the mind becomes more or less affected, and not infrequently melancholia results."* Keith has stated that ten per cent. of his patients who recover from hysterectomy subsequently suffer from melancholia or from other forms of mental disease. Yet this result must have come in his cases,† not so much from the removal of the womb, which is merely a muscular bag, as from the associated ablation of the ovaries, of which the womb physiologically is only the appendage. Sinkler, who carefully and impartially has studied this subject, believes that Glaevecke's "statement is, undoubtedly, too extreme, but the number of cases of insanity following oöphorectomy is large."‡

Whether this deplorable event is due directly to the nerve-shock of the operation itself, together with its emotional environment; whether to the abrupt cessation of an habitual flow, or whether to the absolute need of the ovaries for mental equilibration, is yet an open question. We know, however, that sexuality is a potent factor in women, as well as in men, and that even certain sexual functions, such as coition, menstruation, gestation, parturition, and lactation, of themselves, tend not infrequently to disturb the mental poise. I am disposed, however, in a measure to attribute the attacks of insanity in those women who have lost their ovaries to their brooding over the thought that they are unsexed; and if brooding may be deemed in itself a mental aberration, Glaevecke's sweeping statement is not an extravagant one.

But, above all, the burning question is, Does the removal of the uterine appendages affect the sexual sense of the woman, or in any way unsex her? Here we have an embarrassing diversity of opinion. Some operators contend that in these respects castration does not change her at all; others, that it does so, and often very decidedly. The truth in such cases usually lies in the mean, as I shall try to show.

After a close study of this subject, it seems to me that the fairest comparison of a castrated woman is not to a castrated man, but to a woman who has reached the menopause before her time. Now, the natural change of life when fully established, but not until it is fully established, does very sensibly dull and deaden the sexual sense of women, which ultimately disappears in her long before virility is extinguished in man. Reveillé-Parise, in his classic treatise on old age, enlarges on this fact, and makes the period of gradually lessening sexual feeling in woman to last from the age of forty-five to that of fifty, when this sense is usually lost.§

*New York Medical Journal, July 20, 1889, p. 73.

†Ibid., p. 73.

‡University Medical Magazine, December, 1891, p. 176.

§Traité de la Vieillesse, chapter ix.

This is most marked in those women who have reached the menopause much earlier than the usual time for it. Such women, as is well known, lose their sexual feeling very soon after the cessation of menstruation. Nor is the survival of the sexual feeling after the menopause so essential to the woman, because, when menstruation ceases, she loses the power of procreation, which, however, is retained to an advanced age by the man. Now, what happens in the natural change of life holds good in that artificially produced, with this important difference, that in the latter the sexual feeling is sooner dulled and sooner lost.

My own large experience would lead me to the conclusion that in the majority of women who have been castrated the sexual impulse soon abates in intensity much sooner than after the natural menopause, and that in many cases after the lapse of a few years it wholly disappears. This tallies with Glaevecke's verdict, that "in most of the cases the sexual desire is notably lessened, and in many cases extinguished." In corroboration of this statement I could cite many cases in point, but time forbids.

Dr. Gill Wylie* mentions as one result of castration the atrophy, senile in character, of the external genitalia, which makes coition often very painful. He refers also to a distressing hyperesthesia of the vulva in young women who have been castrated. These conditions I have occasionally seen. One of my patients operated on two years ago, who was unusually amorous before castration, now not only has lost all sexual feeling, but she suffers much pain during sexual intercourse. Yet with true womanly devotion she has studiously kept her husband in ignorance of these facts. Another woman, operated upon not quite a year ago by one of my friends, "abhors sexual intercourse" to such a degree, on account of this hyperesthesia, as to make her married life an unhappy one.

There are yet two other points of importance relating to the castration of women. The first one is, that sterility follows the complete extirpation of the uterine appendages. Now, barrenness is a frequent cause of domestic unhappiness, and is in itself often a great curse. Further, as women advance in age there comes an irresistible yearning for offspring, and she often repeats that despairing cry of Rachel, "Give me children, or else I die." What physician is there of ripe years who has not been importuned by women, hitherto wilfully barren, but now longing for children, to undo the mischief caused by preventive measures?

The next point is this one. The majority of physicians and all laymen look upon women deprived of their ovaries as unsexed. Just as castration in the male, so castration in the female is deemed a sexual mutilation to which common consent attaches a stigma. No woman would marry a

*American Journal of Obstetrics, November, 1891, p. 1374.

eunuch, and few men would wed a woman deprived of her ovaries. In my own practice I have known of several very sad cases of married engagements broken off, of marital infidelity, and of bitter estrangement between husband and wife, all of which could have been avoided had one ovary been spared, or, indeed, had a mere fragment of one been left behind.

To sum up the foregoing statements : It is manifest that during the period of woman's menstrual life, her mental, physical, and social welfare depend greatly upon the continuance of the catamenial and reproductive functions. Therefore the conservation of those organs which preside over these functions is of the utmost importance, and should be so regarded by the physician.

As a help to the conservative treatment of the female pelvic organs, let me consider a few points. In the first place, the fatality of chronic diseases of the appendages is greatly overrated, and that factor need not greatly disturb us or hurry us on to hasty operative interference by abdominal section. Too many appendages have been needlessly removed, and too many lives have been needlessly sacrificed. Far more women perish from the operation of removing the tubes and ovaries than from their diseases themselves. In this opinion I am confirmed by Reamy, who states that in forty years he had "not seen five cases of death directly traceable to ruptured pus-tubes." * After the patient has safely passed through the acute stage of the inflammatory attack, her life is in very little danger. Chronic diseases of the appendages usually affect the well-being of the woman, but they ordinarily do not threaten her life in any other way than by the wear and tear of prolonged discomfort. They may shorten her days, but fatal attacks of peritonitis or deaths from chronic abscess or from the bursting of a pus-tube into the cavity of the peritoneum are extremely rare.

To restore the health of a woman whose appendages are diseased, or to relieve her sufferings, abdominal section is by no means always necessary. Of the advantages of Polk's method of curetting the womb and of packing its cavity, I have had ample demonstration. Let me refer to one case : An uncommonly handsome and finely-formed woman came under my care for nerve-prostration, heightened by menorrhagia and by a constant nagging pain in the left ovarian region and down the right thigh. The cervix was torn and the womb hypertrophied. Both ovaries were swollen and tender, especially the left one ; while the left tube was distinctly enlarged, tortuous, and fixed. I repaired the cervix, curetted the womb, and gave my patient rest, massage, electricity, and topical treatment ; but not drainage. She was in many respects greatly improved, but the menorrhagia still persisted and the ovarian pain stubbornly held its

* American Journal of Obstetrics, April, 1894, p. 525.

own. She was such a splendid specimen of female humanity that I shrank from mutilating her by the removal of the offending appendages. Dr. Polk had just published his valuable paper on uterine drainage, so I sent her to him. He confirmed my diagnosis, and by the use of the curette and uterine drainage restored her to complete health. Here was a case so stubborn that it would ultimately have driven even me to the castration of my patient had not conservative surgery cured her. Since then I have repeatedly employed Polk's method with great advantage to my patients.

Many women with adherent tubes and ovaries, and, for the matter of that, some even with pus in these organs, suffer either no inconvenience whatever or very little, indeed, from that condition *per se*. I know numbers of such women, some with fixed appendages and some with pus in their tubes, who now never need medical advice, and who are to all intents and purposes well. There are, again, others who have pains and aches only at their monthly periods. Let, however, this health break down from grippe, from influenza, from malaria, from overwork, or from nerve-strain; then symptoms may arise from their hitherto latent pelvic lesions. Yet, in most of these cases no surgical operation whatever is needed, for if the woman can be restored to her former condition of health—that is to say, that which she enjoyed just before her final breakdown—she will lose her local symptoms and become symptomatically well. On this matter I can speak positively, for many a patient has been sent to my private hospital to have her distinctly damaged tubes and ovaries removed who has been restored to health without a resort to the knife. By the use of rest, massage, and electricity, by a general building up of the whole system, and by topical treatment, there have been cured by me cases with all the objective and subjective symptoms of ovarian or of tubal abscess. In some few of these cases this treatment was followed by conception, pregnancy, and parturition. In at least two such cases in which I urged castration, fortunately refused, the patients subsequently conceived and gave birth to living children at full term. Nor is my own experience isolated. At the last meeting of the American Gynecological Society, Dr. Robert A. Murray* gave a clinical report of six cases of double pyosalpinx. He had treated them by Polk's method of uterine drainage, and they all afterwards conceived and bore healthy children. In the discussion which followed the reading of this paper, Dr. George M. Edebohls stated that he "had known a number of cases of true pyosalpinx get well, the women afterwards becoming pregnant." Lusk, Chéron, and Dolèris have had an analogous experience. The latter goes so far as to make the too sweeping assertion that eight-tenths of cases of damaged tubes and ovaries can be cured with-

* Transactions of the American Gynecological Society, 1893, pp. 435 and 436.

out operation. This opinion, somewhat modified, was sustained by several physicians who took part in the discussion at the International Congress of Gynecologists, held two years ago at Brussels.

The possibility of a closed-up oviduct regaining its bore is warmly disputed, yet it is a well-known fact that solid uterine fibroids of several pounds weight have been known to spontaneously disappear through retrogressive metamorphosis. At a meeting of the Obstetrical Society of London, held June 7th, 1893, Doran and others referred to forty such cases, and I myself have met with three analogous ones. So, also, will firm and extensive adhesions vanish away. Why, then, may not the thin tubal barriers and septa of inflammatory origin also break down and melt away? On the other hand, great disorganization of the ovaries is not incompatible with conception and pregnancy, for it appears that a very small amount of ovarian stroma goes a great way. Atlee reports two cases in which, one ovary having been removed, the other became so cystic as to need *repeatedappings*, yet each woman not only menstruated, but conceived and gave birth to a child.* In one of these cases, an ovary having been removed many years previously, the other one, becoming cystic, was tapped twice before conception, twice before delivery, seven times afterwards, and was then extirpated. A number of years ago I had a case of intraligamentary cyst of the right ovary. After its removal, which was attended with much difficulty and with much loss of blood, the left tube and ovary were found vitally attached to the pelvic wall, and to the surrounding viscera. In view of the shock under which my patient was laboring, and of the dangerous character of these adhesions, I did not dare to detach or remove this appendage. Yet, not many months later, this lady, who hitherto had been sterile, conceived, and bore a healthy child. Dr. B. F. Baer has had a still more remarkable experience. In his case, the womb and both appendages being firmly bound down by adhesions, he, "by great effort," released the womb, tore the left ovary and tube "piecemeal" from their position, and ligated their "shreddy pedicle." "The right appendages were found in an almost similarly diseased condition, and, when they were dissected loose, they were also in shreds, the tube having been torn off about two inches from the uterus."† Dr. Baer urged their removal, but he was not permitted to do so by a physician present, who was the brother of the patient, and had promised his sister that only one appendage should be removed. Fifteen months later the woman gave birth to a child at full term. To cap the climax, Robertson‡ mentions a marvellous case in point. He extirpated both the

* Atlee, *Ovarian Tumors*, pp. 38 and 39.

† *Annals of Gynecology and Pediatrics*, January, 1894, p. 232.

‡ *British Medical Journal*, September 27th, 1890, p. 722.

damaged ovaries from one of his patients, yet she afterwards conceived and gave birth to a child. His explanation is that he must have left, unwittingly, a scrap of healthy ovarian tissue in one of the stumps. This hypothesis is unquestionably correct so far as it goes, but it does not cover the insemination of the ovum and its descent into the womb, which can be explained only on the supposition that the lumen of one of the oviducts had reopened at the point where it had been sealed up by the adhesive inflammation set up by the ligature.

But, supposing simple therapeutic measures fail, or that the use of the curette and of uterine drainage are not followed by relief, and the surgeon is driven to surgical interference, must he, after breaking up the adhesions, always extirpate the now free uterine appendages? Many surgeons contend not only that the diseased appendage should be removed, but also that both appendages should be extirpated, even if one alone is damaged. This advice is given on the ground that the healthy one is liable, in its turn, to become affected. My own course under such circumstances would be never to remove the healthy appendage unless the menopause had been already established, or unless there existed a good reason for hastening it on, such as the presence of a uterine fibroid, or of uterine disease, or the insanity of the patient, making it undesirable for her to have offspring. On the other hand, should both ovaries be intrinsically diseased, and the tubes contain much pus, I should always remove both uterine appendages in their totality, no matter what the age of the patient might be. Generally, however, the pus is limited to the tubes, and in that case one ovary, barring its adhesions, which, of course, must be broken, is healthy enough to be left behind. In such a case the tube alone, if possible, should be removed, and not the healthy ovary, or the healthy ovaries, if both happen to be sound. Nor have I ever found it needful to remove the womb on account of disease of its adnexa. Some of my most notable cures have been in cases in which the tubes were so rotten that they were either pinched off close to the womb or else were removed by a wedge-shaped incision in the womb itself, the uterine wound either being closed by suture or seared by the actual cautery.

Further, rather than wholly remove all ovarian stroma, I should try, in such cases, unless contraindicated, to leave behind at least a small fragment. For, in several of my cases in which a piece of an ovary not larger than a bean was left behind, not any menstrual or sexual changes whatever took place in the women. Should the uterine appendages be merely adherent, and not intrinsically diseased to any extent, I should, as a rule, during active menstrual life, release them, and perhaps extirpate the worse of the two, but not both of them. Such methods of conservative surgery will be occasionally rewarded by the maintenance of fertility. Polk,

McMonagen,* Schroeder, Martin, and others have published cases in which after a mere fragment of an ovary had been spared, and, indeed, after resection of the oviducts, conception and parturition took place.

The aim of modern surgery is conservation. Limbs, members, and organs are now saved which formerly would have been sacrificed. This is its glory, and this has been brought about by antisepsis. When, but a few years ago, gynecology was weaned from its obstetric nurses, it threw off its swaddling clothes and marched abreast of its sister sciences. But antisepsis, by the glamor of success, has so dazzled modern gynecology as to make it a spoiler rather than a conservator. Reform is here needed. This reform does not imply a return to the expectant therapeutics of our forefathers—"ancestral gynecology," as Chéron scornfully calls it. It signifies conservative gynecology, a golden mean between the let-alone methods of the old school and the too hasty and too radical interference of the new school. — *University Medical Magazine*.

* American Journal of Obstetrics, 1893, p. 807; Transactions of American Gynecological Society, 1893, pp. 175 and 457.

HOMEOPATHIC ATTENUATIONS: FROM THE MATHEMATICAL POINT OF VIEW.

A NOVEL and ingenious criticism of the therapeutic value of homeopathic attenuations of high potency is contributed by Professor Sauter to *Gaea*, Leipzig, July. The fundamental principle of homeopathy, as he presents it, consists in mechanical attenuation of the remedy employed, by solution in water or alcohol in the case of soluble substances, and by attrition with lactose or sugar of milk for the insoluble. The course originally followed by Hahnemann was to make his attenuations of the first potency as 1 is to 100; that is, one hundred drops of the solution contain ninety-nine drops of water or alcohol, as the case may be, and one drop of the medicine. At the present day it is usual to make the attenuations of the first potency as 1 is to 10. In either case, starting from this basis, the attenuations are carried to indefinitely higher potencies in a regular ascending series; that is to say, if we adopt the decimal scale, one drop of the attenuation of the first potency being added to nine drops of distilled water or alcohol, as the case may be, gives an attenuation of the second potency; and one drop of this, of course after due intermixture, added to nine drops of distilled water, etc., gives an attenuation of the third potency. If it is desired to raise the attenuation to the twenty-fourth potency, the simplest way is to take twenty-four glasses, and pour into each of them nine drops of water. Then pour into the first glass one drop of the medicine of the first power; then add one drop of the mixture to the next glass; one drop of that mixture to the third glass, and so on to the twenty-fourth glass, when, if the admixture is thorough, and the original medicine uniformly divided, the proportion of the original medicine in the fluid will be as 1 is to 1 with 24 ciphers annexed.

"And now," says Professor Sauter, "in order to appreciate the medicinal value of the ultimate attenuation, it must be borne in mind that both chemistry and physics point to the conclusion that all bodies are composed of definite numbers of ultimate molecules, which are not susceptible of further mechanical division; but which chemically may be further divided into the several atoms of which the molecule is composed. The investigations of De Heen, Loschmidt, W. Thomson, and others into the size

or diameter of molecules, although followed on different methods, are nearly uniform in result, and give the diameter of a molecule of water as 0.000,000,075 mm., or, roughly, thirty-two billionths of an inch.

"Now, as, according to universal acceptance, a cubic centimeter of a liquid contains sixteen drops, one drop will be found, on calculation, to contain at the utmost one quadrillion molecules, that is, basing the calculation on the size of the atoms without making any allowance for interstitial space. And as one drop attenuated to the twenty-fourth power contains, as was above shown, only $\frac{1}{1000000000000000}$ of a drop of the medicine of the first potency, it follows that each drop at that potency contains just one molecule of the medicine, assuming that admixture has hitherto been perfect; but any attempt to carry the attenuation to a higher potency—to the twenty-fifth or twenty-sixth potency, for example—would be impossible. The one drop of the twenty-fourth power would carry one molecule with it; but on dropping this into nine drops of distilled water, the one molecule of the medicine would exist isolated among about nine quadrillion molecules of water, and the chances against the transfer of the molecule of the original medicine to any attempted attenuation beyond the twenty-fourth potency are 10 to 1, rising to 100 to 1 beyond the twenty-fifth potency, 1,000 to 1 beyond the twenty-sixth potency, and so on."

To afford the non-mathematical mind an idea of what is practically meant by an attenuation raised to the twenty-fourth potency, on the decimal scale, the writer goes into a calculation to show that the Boden-See with its surface area of 539 square kilometers, say 235 square miles, would require a uniform depth of nearly 116 meters, say 64 fathoms, to suffice for the attenuation of a drop of the original remedy to the eighteenth potency; but, according to homeopathic professors, the homeopathic high potencies do not begin until the thirtieth potency is reached; and yet to raise the attenuation to the twenty-fourth potency would require a volume of water equal to the whole water surface of the globe, with a mean depth of more than 90 fathoms. "It is hence," concludes the writer, "clearly evident, on purely scientific grounds, that, as regards attenuations of high potency, they can have no possible remedial value. In attenuations raised to the thirtieth power, the chances are just one million to one against the ultimate molecule of the remedy being present in the drop taken. Assuming that the remedy were equally divided, there would be one molecule of the remedy to every 160 gallons of the attenuated liquid."

—*The Literary Digest.*

Clinical Notes.

A CASE OF CEREBRAL GLIOMA.*

BY J. E. GRAHAM, M.R.C.P. LOND.,

Professor of Medicine and Clinical Medicine, University of Toronto; Physician to the
Toronto General Hospital, and St. Michael's Hospital.

THE patient from whom this specimen was taken was not under my care, so that I was unable to make frequent examinations as necessary.

In any case, the past history would have been unsatisfactory, as the patient had no friends who could give a history of his previous condition.

So far as could be ascertained from himself, he had been in good health until four months previous to his admission into the hospital. He then met with an accident on the railway, when he received a severe blow upon the right side of the head. He was rendered unconscious at the time, but was soon able to go about. Nothing further could be learned as to his condition between the time of the accident and his admission into the hospital. I examined him on two different occasions. His condition was somewhat improved on my second examination. He remained most of the time in bed, although he was able to walk fairly well.

The most striking feature of his case was the presence of aphasia, which was of the motor type, presenting the signs both of the amnesic and ataxic varieties. He understood thoroughly what was said, and would commence to answer, but was immediately stopped for want of words. He would then show signs of impatience. He had forgotten proper names, altogether, could not remember native country or city, but when the name was suggested he at once assented. At times he mixed up the words he used in such a way that he could not to be understood.

He had slight paralysis of the right side of face and of the right arm; but none of the right leg. The tendon reflex on the right side was some-

* Presented at the Toronto Pathological Society.

what increased. He walked without difficulty. His general condition was good, and functions normal.

A few days before he died his temperature rose and he became delirious, and then comatose. I do not know whether any change took place in the paralysis or not. He had no convulsions at any time.

From the symptoms present, and the previous history, I was of opinion that there existed a destructive lesion, either in the centrum ovale or in the internal capsules, on the left side. I did not think the cortex was affected, as he had never had convulsion, and the arm was very free of spasm. We concluded, from the history given, that the lesion might be a hemorrhage, the result of contre-coup, as the injury to the skull was on the right side.

At the post-mortem examination, to my surprise, we found a glioma present in the anterior portion of the centrum ovale on the left side, and affecting the anterior limb and germ of the internal capsule. The glioma was about the size of a large walnut, and presented softer portions in the centre. There also existed a surrounding cerebritis, which probably commenced a short time before death.

A depression of the outer plate was found on the right side of the skull, at the seat of injury. The internal table was intact.

An interesting point arose in this case : How long had this glioma been in existence? Was it there before the accident, or had it formed since that time? It is generally thought that these tumors grow very slowly, but on what grounds I do not know.

In this case the natural inference is that an injury was produced by contre-coup, and that the tumor then commenced to grow.

While the cortical centre itself does not seem to have been injured, the commissural fibres, as well as those passing down to the internal capsule, must have been affected ; otherwise he would have regained to a greater extent his powers of speech.

Progress of Medicine.

MEDICINE

IN CHARGE OF

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AND

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THE PREPARATION OF CONCENTRATED ORCHITIC FLUID. (D'ARSONVAL.)

Concentrated orchitic fluid is obtained by macerating testicles for twenty-four hours in glycerine, in the proportion of 1 kilo. to 1 litre of glycerine at 32°C. The macerator, a sterilized tin dish, is provided with a perforated piston, so that the testicles might be kept at the bottom of the glycerine, and to avoid the alteration that might take place by the testicles coming in contact with the air. Filter through Chardin's filter-paper, and sterilize the liquid by exposing to carbonic acid for four or five hours at 50 atmospheres. The observer has found that this sterilization is absolute, and it has allowed him to come back to extracts well loaded with glycerine, which he had before abandoned because of the difficulty he had encountered to filter glycerine through the porous plate. This new liquid cannot be used undiluted. For this purpose he uses salt solution 1 per cent., or carbolized water 1 in 1000. Pain is avoided by mixing the orchitic fluid intimately with the solution, and injecting slowly.—*Revue Internationale*.

TREATMENT OF TUBERCULOSIS.

M. Lancereaux read a report upon a work of M. Caravias on the treatment of tuberculosis by substances which form succinic acid in the organism, such as raw meat, fats, bimalate of lime, benzoic acid and its

salts, non-acidified pepsin, asparagin, carrots, green vegetables, etc. According to M. Caravias, this treatment produced a notable amelioration in cases in which it had been tried, except, of course, in such as suffered from too extensive lesions. He believes that it has no action upon the bacillus, but that by its antiseptic properties it antagonizes invasion by the bacilli, modifying the soil, as it were, and allowing the tuberculous material to pass through its several phases, to be eliminated in the expectoration.—*Semaine Médicale*, January 31, 1894.

VENESECTION IN RENAL ASTHMA: INSTANT RELIEF; URIC ACID IN THE SERUM.

I was hastily summoned to this patient on November 20th, 1893, in the absence of his ordinary medical attendant, and found the symptoms so urgent that I was obliged to act alone and at once. The case was that of a man, aged 52, who had been under treatment for albuminuria and dropsy for rather less than a week. I found him in a state of orthopnea, and tossing about in bed in his distress. Expiration was prolonged and accompanied with loud dry râles; the pulse was somewhat slow—the actual rate was not noted—and, as it appeared to me, of markedly high tension.

I immediately bled the patient *pleno rivo* to 15 ounces, with the result that he could at once lie down, and that all the distressing symptoms had disappeared next morning. He was afterwards in the Western Infirmary for some time, and there is reason to believe that the attack has been an acute one, and not likely to merge into chronic Bright's disease.

Having previously discovered crystals of uric acid in the serum of two cases of convulsions which I had bled, and being much interested in the important researches of Dr. Haig on uric acid in the causation of disease, especially headache, high-tension pulse, convulsions, epilepsy, etc., I forwarded a specimen of the blood to him in the above case, which he was so kind as to examine. He reports as follows on November 24th, 1893:

"The specimen of blood you sent me on November 21st contained uric acid to the extent of 0.015 per cent. My experience with blood drawn during life is too small to draw any sweeping conclusions from; but the largest quantity I have found in blood of venesection was 0.03 per cent. in a case of cerebral hemorrhage. I have often found smaller amounts, 0.002 to 0.004. I should think, therefore, that 0.015 per cent. represents a distinct excess of uric acid, but that double this quantity may be found in some cases."—ROBERT KIRK, M.D., Physician to the Dispensary, Glasgow Western Infirmary, in *British Medical Journal*.

EARLY DIAGNOSIS OF GASTRIC CARCINOMA.

In the *Deut. med. Woch.*, May 17, 1894, Cohnheim, of Boas's Poliklinik, contends that it is possible to make a fairly certain diagnosis in the absence of a tumor. The old idea that chronic gastritis is accompanied by lactic and fatty acid formation is disputed, but in cases of carcinoma an intense reaction to Uffelmann's test for lactic acid appears. For such an intense reaction stagnation of the gastric contents and a lasting absence of free hydrochloric acid are necessary. If only one of these conditions is present, as in chronic gastritis or dilatation of the stomach, such a reaction does not appear. The author relates a case in which a simple ulcer was suspected, and in which treatment had no lasting effect. When the stomach contents were at length examined no free hydrochloric acid was present, and Uffelmann's test gave a marked result. The stagnation of the gastric contents here was against chronic gastritis, where the food passes into the intestine within the usual time. Later, besides other symptoms, there was marked wasting, and yet no tumor could be felt. At the necropsy a limited growth was found at the pylorus. The author points out that in this case, in the absence of recognizable tumor, a correct diagnosis was made six months before death, chiefly from the constant and marked presence of lactic acid. Within eleven months ten such cases were seen without recognizable tumor, all of which gave a positive reaction with Uffelmann's test, and yet no such reaction was ever observed in cases of gastrectasis or of chronic gastritis with absence of free hydrochloric acid. The author lays stress on the importance of early diagnosis in regard to the question of possible removal. Lastly, he refers to the new test proposed by Boas for lactic acid in the stomach contents.—*Epitome, British Medical Journal*.

THE TREATMENT OF CHRONIC RHEUMATISM.

Dr. Dujardin-Beaumetz divides chronic rheumatism into three groups : (1) Rheumatismus deformans (Charcot) ; (2) chronic, succeeding an acute rheumatism ; (3) the multiple manifestations in chronic course of a rheumatic. The first group must be treated for a disturbance of nutrition, and arsenic and the iodides give the best results. Fowler's solution, sodium arsenate, arsenious acid are useful, but arsenical baths—because it has been proven that an intact skin does not absorb medicinal solutions—are likely to be therapeutic illusions. In the iodine treatment, the iodine itself is not to be preferred to the iodides, because, even if administered in wine, it irritates the stomach. Of the iodides, an average daily dose of fifteen grains is sufficient ; as a potassium iodide, or as sodium iodide with the sodium bromide and chloride, or in alteration with gold and sodium

chloride. For the painful crises, phenacetine gives the best results. Paracetphenetidine, in seven-grain doses, is a powerful analgesic. The diet is the opposite to that of the gouty; meats, green vegetables, generous wines, and milk. The external treatment consists in electricity and balneotherapy. The chronic rheumatisms of the second class are relieved by the salicylates, and they as well have a preventive action. Fifteen to thirty grains per day, or, in some cases, asaprol, and more rarely phenacetine, are required. But the essential cure of this rheumatism is external treatment, massage, electricity, and balneotherapy. The massage, methodically employed, and with care, during the period of quiescence, benefits the functional impairment of the joints, and as well the accompanying muscular atrophy. The muscular atrophy is benefited by electricity, by continued or slowly interrupted currents. The baths at Aix, Bourbonne, Plombières, and Dax, particularly the mud-baths at the last station, give excellent results. For diet, a mixed one, in which vegetables form a large part, is indicated. It is important that the different emunctories shall act properly, and laxatives and diuretic liquids should be employed, white wine or milk. In the last form it is the diathetic condition which must be opposed; here the thermal waters and regulated diet are important. Muscular pain and neuralgias of rheumatic origin are relieved by antipyrine, and especially phenacetine, which should be placed by the side of sodium salicylate and asaprol. In this class also the bowels should be kept open and the kidneys active, and in the latter case the action of antipyrine in diminishing the urinary secretion may be a disadvantage. To assist the skin in performing its functions, vapor baths, Russian baths, warm or Scotch douche, even the cold douche, are excellent methods. As for the thermal stations, especially are to be considered Dax, and afterwards Plombières, Aix-les-Bains, Bourbonne-les-Bains, Bourbon-Lancy, the last particularly for the visceral manifestations, the myocardites. The diet should not include any substance which can contain toxic ptomaines. Game, fish, shellfish, mushrooms, old cheese, should be guarded against, while a vegetable diet, milk, and fruits, are useful.—*Bulletin général de Thérapeutique*, 1894, 6th liv., p. 97.—*American Journal of the Medical Sciences*.

SUPPURATIVE PYLEPHLEBITIS; LAPAROTOMY; RECOVERY.

Frederick Treves reports the following very instructive case (*Lancet* London, 1894, vol. i., No. 11): A young lady, aged fifteen years, was seized with symptoms of perityphlitis, ten days after an ocean voyage, during which, in addition to full meals, she had eaten large quantities of nuts and candy. She had an attack of perityphlitis four years before, and

another two years prior to the one reported. She was of constipated habit. The attack began with sudden pain in the abdomen, vomiting, coated tongue, and moderate fever, which reached 104° on the third day. The symptoms gradually ameliorated, until the eighth day, when there was a severe rigor, the temperature registering 103° . The condition was thought to be due to stercoral ulcer. From this time on she pursued an irregular course, gradually becoming weaker and more emaciated as a result of her disease, with the accompanying fever and vomiting. On the thirty-first day Mr. Treves was asked to perform exploratory celiotomy, on the supposition that an abscess of the liver existed. At this time the patient was very ill, she was emaciated, very prostrate, the forehead was wrinkled, and she appeared in a state of ceaseless anxiety. Pain was complained of "all over," but marked tenderness was manifest only over the liver.

An incision was made in the right semilunar line. There were no peritonitis, no ascites, and no adhesions. The cecum appeared normal; the appendix was healthy and freely movable. The gall bladder exhibited no morbid changes. The appearance of the liver was remarkable. It was enlarged, of normal color, but its consistence was as soft as a lung. All of the exposed portion was dotted with minute yellow specks, perfectly round, and the size of an ordinary pin-hole; they were not perceptible to the touch. The region of the fissure of the portal vein was examined, but nothing peculiar was noted. The patient made a rapid and uninterrupted recovery, and at the time of the report, eighteen months after the operation, her health had remained sound.

It is suggested that the case was one of typhlitis or perityphlitis followed by pylephlebitis. The points of particular interest are: (1) All cases of perityphlitis do not depend upon a previous appendicitis, even where there have been repeated attacks (in the present case the appendix was entirely healthy); (2) the rapid and complete recovery following exploratory celiotomy; and (3) recovery after pylephlebitis. In connection with the second feature, the author calls attention to the monograph of J. William White on "The Curative Effect of Operation *per se*," in which a very large number of cases have been collected where simple exploration has been followed by amelioration or cure of apparently malignant conditions.

Treves has seen one other case in which recovery took place. The text-books teach that the condition is commonly fatal.

THERAPEUTICS

IN CHARGE OF

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THE USES OF GUAIACOL.

Recently guaiacol has come into such general use as internal treatment for phthisis, as a local paint to reduce temperature, as a topical application in quinsy, and as an external application in several affections, that we append a few excerpts from recent literature on the subject. The reason that creasote so frequently produces gastric derangements is that it is not a definite chemical product, but is a mixture containing guaiacol, toxic cresol, and toxic derivative of pyrogallol. Guaiacol, the active principle of creasote, is recommended by Dr. Sahli, instead of using the unstable creasote. The liquid guaiacol itself is never a pure product, containing only seventy-five per cent. pure guaiacol. C.P. guaiacol is altogether too irritating and poisonous to become of general use. Von Heyden has greatly overcome this difficulty by combining guaiacol with carbonic acid, when an innocuous and non-irritating compound is formed. Guaiacol carbonate retains all the valuable properties and none of the deleterious ones. It is decomposed in the intestines into carbonic acid and pure guaiacol, and from here it exerts its medicinal effect.

GUAIACOL CARBONATE IN THE TREATMENT OF TUBERCULOSIS.

Guaiacol carbonate, ninety-one per cent. of which is chemically-pure guaiacol. It is a well-defined, white, crystalline powder, *odorless, tasteless, neutral, and non-irritating*. When the stomach is healthy it has no action upon it. In the stomachs of tuberculous subjects, which contain enormous quantities of parasitic saprophytic bacteria, a sufficient quantity of guaiacol is set free, as the effects of putrefaction and fermentation, to check the development of the bacteria, and thus to unload the stomach of

these pernicious parasites. The carbonate of guaiacol is, therefore, appropriate in every respect to the stomach. In the intestines it is slowly decomposed, water being taken up, and free guaiacol and carbonic acid being set free. There is therefore no danger of any toxic effect. The free guaiacol at once begins to be absorbed, so that even a considerable dose of guaiacol carbonate occasions no accumulation of free guaiacol in the intestine. A dog some months old, weighing 5 lbs., after fasting for 24 hours, was given, by means of a tube, 180 grains of carbonate of guaiacol the first day, and 225 grains the following day (the medicament being mixed up with milk), without experiencing any distress. Rabbits have taken the same substance for a week without any untoward effects.

Half an hour after the absorption of the drug, free guaiacol can be demonstrated in the urine. Once in the blood, it acts by steadily and permanently removing from the blood of phthisical patients the poisonous substances generated by the tubercle bacilli. (*Berliner klinische Wochenschrift*, 1892, No. 3.)

Guaiacol carbonate was first used by Sanitätsrath Dr. F. Hoelscher in the Hospital of the Three Kings, at Muelheim on the Rhine (*Berliner klinische Wochenschrift*, 1891, No. 51). From September, 1890, to October, 1891, 60 consumptives were treated with it. The daily dose was, at the beginning of each treatment, 6 to 15 grains, given in two portions, morning and night. This was gradually increased until the daily dose reached 90 grains; for, like creasote, guaiacol does more good the larger the dose of it that can be borne. All these patients, including two who always vomited after creasote, took guaiacol well, even when fasting.

One of the first points noticed by Dr. Hoelscher was a marked improvement in the patients' appetites, some being constantly hungry. The increased ingestion of nutriment soon caused increase of bodily weight and strength. The fits of coughing became less violent; expectoration was easier and less abundant.

This latter improvement made the sleep less disturbed and more refreshing. The night sweats disappeared and the fever diminished.

The physical signs showed marked improvement of the lungs. The râles diminished and in some cases ceased entirely. Dullness disappeared rapidly, and, in extremely favorable cases, large cavities so decreased in volume as not to be recognizable by physical examination in the course of a few months. Sputum examinations also showed a rapid decrease in the number of bacilli.—Notes supplied by Schening and Glatz.

EXTERNAL APPLICATION OF GUAIIACOL IN FEVERISH CONDITION.

Dr. Stolzenburg, in *Berliner Klinische Wochenschrift*, details his experience with the external application of guaiacol as recommended last year

by Sciolla, of Genoa. From two to four cubic centimeters of guaiacol are painted on a portion of the skin, preferably that of the thigh, and this is then covered with some impermeable material. Observations are recorded of its effects in septicemia, acute tuberculosis, rheumatism, pneumonia, etc. He arrives at the following conclusions: (1) Guaiacol painted in this way over the skin produces a prompt and decided fall in temperature. (2) The first dose in an adult should not be greater than two cubic centimetres. If it is well borne, and the fall in temperature is not too marked, the amount may be increased to four cubic centimeters, which dose it is seldom desirable to exceed. (3) Untoward effects of moderate doses upon the heart and kidneys were never noticed. Large doses in weak individuals produced symptoms of collapse. (4) The symptoms associated with the fall in temperature—*e.g.*, profuse perspiration succeeded by a chill as the temperature begins to rise again—sometimes weaken a patient to such an extent that its prolonged use cannot be recommended. (5) The observations so far have not been sufficient to show the effect of the treatment on the whole course of any disease.—*International Medical Magazine*.

ON THE ABSORPTION OF GUAIACOL BY THE SKIN.

Dr. Linassier and Dr. Lannois (*Semaine Médicale*) have carried on observations on the absorption of guaiacol by the skin and its after-elimination by the urine. Their experiments prove that the drug is really absorbed by the skin, as the effect takes place with equal intensity when the patient breathes through a tube opening outside the room where the patient sits. In a quarter of an hour after the application of two grammes to the skin, its elimination by the kidneys becomes manifest. The elimination reaches its maximum in from one hour and a half to four hours, and in twenty-four hours after the application only a trace can be found in the urine. The total quantity eliminated in this way may amount to about fifty-five per cent. of the total quantity applied to the skin.—*International Medical Magazine*.

THE EXTERNAL USE OF GUAIACOL.

In *La Province Médicale* for February 3rd there is an article on this subject, of which the following is the substance: This drug, which was used by Sciolla and Bard, has for some time been employed as an antithermic. It consists in painting the greater part of the exterior wall of the thorax, and sometimes the forearms, with pure guaiacol. According to different authors, the doses are variable, ranging from 1 to 2 cubic centimeters up to 7 or 8. There is a difference of opinion as to the employment of this

liquid. Sciolla, Bard, and other physicians use pure guaiacol, while others, like Desplats, mix it with glycerine or alcohol. In several cases of advanced phthisis a marked reduction of two degrees has been obtained by painting the entire surface of the front of the thorax with pure guaiacol. Unfortunately, the effects of this treatment are only temporary, not lasting more than three or four days. Sometimes, also, applications of this kind produce a marked rise in temperature—in one case two degrees. It is necessary, then, in making use of this procedure to ascertain the susceptibility of the patient, and to use at first small and then progressively large doses. There have been of late years interesting attempts in the employment of this procedure. Casasovici and Miron Sigalea have used guaiacol mixed with tincture of iodine, in the treatment of pleurisy, in the following proportion: Tincture of iodine, 385 grs.; guaiacol, 75 grs. This quantity is used in a single application, and the diseased parts are thoroughly and extensively painted with it every night. These applications cause a considerable reduction of temperature, profuse perspiration, and an increased flow of urine, followed soon after by complete resorption. These results seem to have been obtained, particularly in one case, where there was abundant pleuritic effusion on the left side, in which tapping had not been followed by any relief, but had caused a considerable rise in temperature, by the application of iodized guaiacol, the fever disappearing in a few days and the effusion becoming resorbed.

M. Desplats has recently conceived the idea of applying guaiacol in the treatment of painful rheumatic inflammation of the joints, after having observed a case in which applications of guaiacol had been used with excellent results. He had used a mixture of equal parts of guaiacol and pure glycerine. The joints were thoroughly painted with this mixture and afterwards covered with a dry dressing. In one case of acute rheumatism and in three others of arthritis deformans with sharp pains the results were excellent. The pain was completely subdued, and in the first case the patient recovered rapidly. This procedure has recently been employed in applying guaiacol for articular neuralgia of the shoulder, which was very painful, in a tuberculous patient, who experienced marked relief. It is easily employed, and not dangerous if the indications mentioned are conformed to.—*New York Medical Journal*.

GUAIACOL AS A TOPICAL APPLICATION IN THE TREATMENT OF ACUTE TONSILLITIS.

Raymond (*Medical Record*), as a result of experience, found that the application of guaiacol is somewhat unpleasant and is attended with quite a little smarting, but as its duration is only from one to five minutes in

most cases (although in some instances it lasted for several hours), the relief caused by the application more than overbalanced the pain. However, it is frequently no more painful than nitrate of silver or many other remedies commonly used, and possesses many advantages over them, the cardinal one being as a curative measure or as an abortifacient. It was thought that a thorough application of cocaine (ten per cent. solution) prior to the application of guaiacol would lessen the degree of smarting, but it seemed to aggravate it. The applications were made by means of a cotton swab dipped into pure guaiacol, and applied over the surface of the tonsils, care being taken to prevent it from getting into the larynx. To keep the throat moistened, troches of althea, or guaiac, or gargles were given. In every case where marked febrile symptoms were noted, the temperature was found to drop from one degree to normal within a few hours. In one case where it registered 103.5° F., it fell to normal in four hours.

In the superficial or lacunar variety, the inflammation was terminated far more speedily than in the phlegmonous.

In a number of cases with a history of having had quinsy, and where every evidence of a recurrent attack was present, it was found that not more than two applications were necessary to abort the disease, and in many instances it did not last more than forty-eight hours, and in none did suppuration occur. In many cases where patients were unable to swallow without intense pain, they were able to do so within ten minutes. In a few patients suffering from a primary attack, swelling was seen to subside within a few hours.

THE VALUE OF GUAIACOL AS AN ANTIPYRETIC.

Thayer, of Baltimore, contributes a valuable therapeutic summary on this topic to the *Medical News*, and concludes from the few experiments which he has made, and from a consideration of the results obtained by other observers, that we are, perhaps, justified in asserting that guaiacol applied to the skin is readily absorbed into the economy; that its application is followed in most instances of fever by a gradual reduction in temperature, which reaches its lowest point generally between three and four hours after the application; that this fall of temperature is almost always associated with disagreeably profuse sweating; at a variable period, usually a short time after the lowest point is reached, the temperature rises rapidly, generally in association with marked chilly sensations, if not with an actual chill; that a dose of more than 2 cubic centimeters is rarely advisable; that exactly similar results are produced by the absorption of guaiacol through any other channel (the rectum or the subcutaneous tissues);

that the antipyretic action is exactly similar to that which has been previously observed to follow a corresponding use of creosote and carbolic acid; that, owing to the disagreeable effects of the immediate application of guaiacol (sweating and chilliness) and the weakening effects of the continued use, its employment as an antipyretic, as in the case of carbolic acid and creosote, will probably have but a limited application.—*Therapeutic Gazette*.

TRICHLORACETIC ACID AS AN IDEAL CAUTERANT.

The January, 1894, *Monatsschrift für Ohrenheilkunde* contains an enthusiastic paper by Von Stein, of Moscow, in furtherance of his primary claims for this medicament. Some of the advantages urged can hardly be claimed for anything else, and the methods seem to deserve full trial. Admitting that it is more painful than chromic acid and less vigorous than galvano-cautery, he differentiates the non-fibrous hypertrophies as the true field for its use as a cauterant; but claims, as the result of clinical and laboratory experience, to have demonstrated that it is an adjuvant of the greatest value to the other forms of cauterization, increasing the efficiency and lessening the reaction. The application of the crystals or concentrated solution to a bare or eschared surface prevents all putrefactive changes, almost wholly does away with febrile consequences, and promotes rapid, comfortable healing. Further, his employment of it in ozæna cases has not only speedily controlled the odor, reduced crust formation, and hastened improvement, but has even led to so decided a hypertrophic tendency of the sclerosing surfaces as to demand at times reduction by decided cauterization. In acute coryza he has employed weak solutions (1 to 1,000 to 2,000) by instillation or spray, with prompt and safe resolution after the brief increase of secretion; otitic consequences have seemed especially rare in cases thus antiseptically treated. He cautions against strong applications until the tolerance and inadequacy of weaker solutions have been proved; and others will do well to be more conservative than he now is, since he sometimes insufflates crystals into the Highmore or ethmoid sinuses. While the conditions which he selects for its use as a cauterant seem those in which still milder measures would succeed, and his view is generally rather roseate, trichloracetic acid would seem to have a special place as an aid in other cauterizations, and may prove our most valuable medicament in combating the obstinate ozænatous conditions.

[NOTE.—We have used trichloracetic acid very frequently during the past two years, and have nothing but praise to bestow on it. The pain produced by its application is controlled entirely by the previous use of a two per cent. solution of cocaine. The eschar is dry and separates readily.]

OBSTETRICS

IN CHARGE OF

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AIR EMBOLISM IN PLACENTA PREVIA.

Henck (*Zeitschr. f. Geb., u. Gyn.*, Band xlviii., 1 H.), Olshausen, in a recent paper on this subject, has suggested that the sudden deaths frequently observed during version in placenta previa are probably due to air embolism. Kramer and Kruckenberg have each published a case in which the cause of death was found in the entrance of air into the veins. The author has recently encountered a similar experience. The patient was a primipara twenty-eight years of age. Hemorrhage began in the seventh month. On admission to the hospital the cervix was found dilated sufficiently to admit one finger, and the placenta presenting centrally over the os internum. Owing to repeated recurrence of hemorrhage, version was done under chloroform. The entire hand was carried into the vagina. Two fingers were passed into the uterus, one edge of the placenta separated, and the membranes broken. A foot was brought down with difficulty with the aid of external pressure. The chloroform was then discontinued. A violent pain occurred, and the woman suddenly became pulseless and profoundly cyanotic. Various restorative measures, including rhythmical pressure over the cardiac region and artificial respiration, were tried, but to no purpose. The respiratory movements became slower and slower, and finally ceased altogether, within from three to five minutes after the pulse stopped. The child, which was dead, was still undelivered. At the autopsy, two hours after death, air bubbles as large as a hazel nut were found in the right jugular vein. Bubbles of air were demonstrated in the right heart by opening its cavities under water. The coronary vessels contained air. The myocardium was not impaired. Air bubbles were also to be seen in the right spermatic vein. The author believes that the air introduced into the uterus with the hand was forced into the venous sinuses on the occurrence of vigorous uterine contractions.

Henck thinks the possibility of air embolism fully established by his own and the other two cases to which he alludes. The fact that after similar deaths air has not always been found in the heart and veins is due, he believes, to faulty methods of examination.—*Brooklyn Medical Journal*.

FATAL NAUSEA AND VOMITING OF PREGNANCY.

Dr. E. P. Davis, of Philadelphia, read a paper on this subject before the American Gynecological Society. He reported three fatal cases which had come under his observation. In two he had not seen the patients in time to bring on an abortion before the anemia had become pernicious; in the third the patient left his care and died in the hands of another physician. His conclusions were (*New York Medical Record*): "Nausea and vomiting of pregnancy is dangerous in proportion as it induces pernicious anemia. The condition of danger is to be recognized by studying the cases in the light thrown upon them by the pathology of anemia. Immediately pernicious anemia was present the condition was dangerous; and if the symptoms did not cease at once by local or other treatment the uterus should be emptied by modern surgical methods. In the case related death was preceded for a time by streaks of coffee ground in the vomited matter, by substernal pain, by bud change, which in one case showed itself in purpuric spots; and in one at autopsy many organs as well as the heart were in a state of fatty degeneration."

RESULTS OF TREATMENT OF UTERINE HEMORRHAGE BY HYDRASTININ. (KALLMORGEN.)

The results were obtained by the observation and treatment of 100 patients during two and a half years at the University Hospital for Women at Berlin. According to the author's review of the literature of the subject, hydrastinin, an alkaloid obtained from the oxidation of hydrastin, was first employed therapeutically by E. Falk in 1890. Several series of observations are mentioned, of which the results agree to an unusual extent.

The medicine was administered by the mouth at first, in the form of trochisci and afterwards in pill, the dose varying from $\frac{1}{2}$ to 1 grain three times a day. The by-effects were only slight, occasional stomach-ache, or nausea. No other therapeutic treatment accompanied that of hydrastinin.

The women were out-patients, and were seen only two or three times a month. They were usually advised to take the pills when the bleeding came on; in cases of typical menorrhagia, the medicine was begun two

or three days before the appearance of the menses. Considerable care appears to have been taken to follow up the after history of the cases.

The best results were obtained in the cases of hemorrhage following hematocele (100 per cent. cured); in "simple menorrhagia," 85 per cent.; in hemorrhage after abortion, 83 per cent.; and in the hemorrhage depending upon disorders of the tubes and ovaries, 75 per cent.

Less satisfactory was the treatment of chronic endometritis, and little or no influence of the drug could be observed in cases of hemorrhage during pregnancy, or of hemorrhage from myoma and carcinoma.—*Manchester Medical Chronicle.*

THE EFFECTS OF QUININE ON PREGNANCY.

A collective investigation of this subject is published in the *Indian Medico-Chirurgical Review* for February, 1894, the results of which are as follows:

(1) The existence of pregnancy is no bar to the administration of quinine.

(2) For fevers and other affections during pregnancy in which quinine is indicated, the effects of the drug are more marked than those of any other.

(3) That abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy.

(4) That allowing for an idiosyncrasy, in cases in which a tendency to abortion exists, and in others as a matter of precaution, quinine is best administered combined with a sedative (opium).

(5) Hence the old-standing view of the action of quinine on the duration of pregnancy is not borne out by the clinical experience collected in the replies.—*Therapeutic Gazette.*

THE PREVENTION OF CRACKED NIPPLES.

The *Lancet's* Paris correspondent says: "The direct relation of mammary abscess occurring during the period of suckling and excoriations of the nipple is now fully admitted. Many mothers object to suckling their infants on account of the dread of this complication. Artificial feeding, with its frequent failures, is then resorted to, and the child suffers. Antiseptic washing of the nipples has greatly diminished the frequency of abscess of the breast, but cracked nipples continue to be of common occurrence. For the last ten years Professor Pinard has been in the habit of advising nurses, as a matter of routine, to keep the nipples covered with a compress saturated with a solution of boric acid. This precaution has had the effect of markedly diminishing the frequency of lymphangitis, but

instances of an increase of temperature in young mothers due to microbial infection of the nipples are still numerous. M. Lepage strongly recommends that the nipples should be regularly washed with the following solution: Red iodide of mercury, 10 to 20 centigrammes (2 to 4 grains); spirit of wine, 50 grammes ($1\frac{1}{2}$ ounces); glycerin, 500 grammes (1 pint); distilled water, 450 grammes (1 pint). If, after using this for a few days, the ulceration disappears, substitute a solution of boric acid. Any crack that may develop is covered with tarlatan moistened with the mercuric solution. The following figures appear to confirm M. Lepage's good opinion of the comparative value of his method. In three hundred and thirty-one cases of lying-in women whose breasts were treated by the Pinard method there was an increase of temperature in sixty-seven, the corresponding figures in M. Lepage's cases being twenty-three out of four hundred and forty. Moreover, the healing of the cracks is said to be expedited and the pain greatly diminished by the mercurial treatment."—*New York Medical Journal*.

ASEPTIC DRESSING OF THE UMBILICAL CORD.

The necessity for and the method of aseptic dressing of the umbilical stump are clearly set forth by Dr. Joseph McAllen in the *American Journal of Obstetrics* for April, 1894.

The infecting micro-organisms and ptomaines, giving rise to septic diseases in the newborn, gain entrance into the system through the umbilicus, and, therefore, the greatest care in the dressing of the cord must be taken.

Physiologically, the process of separation is a desiccation, and not, as many suppose, a putrefaction or ulceration. The dressing that keeps out microbic and other infection and hastens desiccation is the one best adapted for the purpose. The cord is secured by a clamp or ligature about two and a half inches from the abdomen, and the child turned over to the nurse to be washed. The cervix cascosa should be thoroughly removed, rubbing the child with pure olive oil and then washing with warm boiled water and pure white castile soap.

The hands of the accoucheur having been made perfectly aseptic, the funis and abdomen of the child should be wiped off with a 1-1000 bichloride of mercury solution. The cord is again cut about one and a half inches from the abdomen, and stripped after Goodell's method, so as to press out all its gelatinous material, and a sterilized ligature is then applied. The cut end of the cord is touched with a bichloride tablet.

The stump is now enveloped in sterilized gauze, not sublimated, but saturated with pure glycerine. This is turned up upon the abdomen, and

another pad, soaked in glycerine, placed over it, and the whole kept in place by a sterilized bandage.

Chemically pure glycerine is especially indicated as a dressing for the stump, as it is bland, unirritating, antiseptic, and has great hygroscopic properties.

If the umbilicus ulcerates, repeated irrigations with hydrogen peroxide should be used, afterwards applying the stick of nitrate of silver thoroughly, and dusting the parts with aristol, and covering with sterilized gauze and bandage.

MYOMECTOMY DURING PREGNANCY.

Stavely (*Johns Hopkins Hospital Bulletin*, 1894, No. 38) states that myoma complicating pregnancy is rather uncommon, on account of the tendency of this growth to cause sterility, or, in the event of pregnancy, early abortion. Virchow and Scanzoni state that fully 50 per cent. of women bearing myomata are sterile. If pregnancy occurs, notwithstanding the existence of this growth, the necessity for surgical interference must be considered, and depends upon the individual peculiarities of each case. Thus, a small myoma may not complicate the course of pregnancy or interfere with labor, no matter where situated. An interstitial myoma of the upper zone of the uterus, even though of considerable size, usually offers no mechanical obstruction to labor, and, unless symptoms arise which render an operation necessary, should not be touched. Tumors which are situated in the early months of pregnancy in the lower part of the uterus may gradually ascend from the pelvis and occupy such a position at term that labor is in no way complicated.

A pedunculated myoma blocking the pelvis and causing severe pressure symptoms may frequently be freed from its confined position by careful manipulation, and this may be accomplished more readily by placing the patient in the knee-chest position. Manipulation may either fail on account of the cramped environment of the tumor, or on account of the adhesions which bind it so firmly in the pelvis that attempts at separation may be attended by disastrous consequences, as the cases cited by Phillips and Handfield-Jones prove.

The dangers from surgical operation in these cases are shock, abortion, hemorrhage, intestinal obstruction, and infection. On the contrary, in non-interference, abortion, hemorrhage, sepsis, rupture of the uterus, pressure symptoms, intestinal obstruction, and mechanical obstruction to labor may occur.

The author draws the following conclusions from an analysis of the cases operated on: (1) Operations performed during the last eight years

have been attended with much better results than in former years; (2) operations upon sessile myomata are more disastrous to the fetus than are those of pedunculated tumors; and (3) myomectomy, for pedunculated or sessile myomata, is comparatively safe and thoroughly justifiable in properly selected cases.

INFLAMED BREAST: GALACTOPHORITIS IN MOTHER AND CHILD.

Macé (*Bulletins et Mémoires de la Société Obstét. et Gynéc. de Paris*, March, 1894) states that a woman, aged 32, in her second pregnancy, was naturally delivered of a female child on January 28th. The nipples soon became sore. Compresses of one-fifth alcohol solution were applied, and the patient was directed to wash the nipples with boracic lotion after each act of suckling. The right nipple was partly retracted. On February 8th rigors and pain in the right breast occurred. Lymphangitis and galactophoritis of the right nipple were detected, and some of the outer and lower lobules of the gland were tender. Sublimate compresses were applied. The pain abated; nothing issued from the nipple on pressure. The patient persisted in suckling the child with the right breast; in consequence it lost weight, and passed unhealthy motions. On February 11th the mother took to nursing with the left, or healthy breast, only, and the child was further fed on sterilized milk. In the evening pus was pressed out of the right nipple; there was suspicious induration around the affected lobules. Sublimate compresses were applied, and the expression of pus continued; in consequence mastitis was averted, and the breast soon recovered. On February 13th, the infant's right breast was found to be swollen; the axillary glands were not enlarged. On gentle pressure, milk mixed with pus and then pure pus escaped from the nipple. Sublimate compresses were applied; the expression of pus was continued daily as in the mother's case; in two days the breast was well, but the compresses were continued for a few days longer. The disease in the child's case was probably due to direct infection by contact of pus from the mother's breast. In Arbel's case the woman who suckled the child had ophthalmia. Fournel believed that the breast might become infected when passing through the mother's vagina. Karlinsky, the author observes, has shown that an infant's breast has been known to become inflamed through ingestion of impure milk. In Macé's case the child was not so seriously ill as to raise suspicion of this indirect manner of infection.—*British Medical Journal*.

SURGERY

IN CHARGE OF

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SYMMETRICAL GANGRENE. (JACQUES BORELIUS.)

Poor farmer, æt. 33, formerly having bronchitis with anemia, having cerebral and vertebral lesions, with vertigo and headache of long standing, was attacked by typhoid fever with loss of consciousness during three weeks. On regaining consciousness he complained of pains in the lower extremities and an unbearable burning in four of his right toes and in three of the small toes of his left foot. All seven toes became gangrenous. Recovery. It appears to the observer that this symmetrical gangrene was not a disease of itself, but only a symptom of trouble in the cord, that might take place in many other affections, in chronic affections of the nervous system, or even under other circumstances.—*Revue Internationale.*

J.A.A.

CONCLUSIONS ARRIVED AT FROM A STUDY OF APPENDICITIS

OBLITERANA BY DR. SENN.

(1) Appendicitis obliterans is a comparatively frequent form of relapsing inflammation of the appendix vermiformis.

(2) It is characterized by progressive obliteration of the lumen of the appendix, by the gradual disappearance of the epithelial lining and glandular tissue, and the production of granulation tissue from the submucous connective tissue, which by transformation into connective tissue and cicatricial contraction starves out remnants of glandular tissue, and finally results in obliteration.

(3) The obliterating process manifests a progressive tendency, and may finally result in complete destruction of all glandular tissue, and obliteration of the entire lumen.

(4) The incipient pathologic changes occur either in the mucous membrane of the appendix, in the form of superficial ulceration, or as an interstitial process following lymphatic infection.

(5) The most constant symptoms which attend this form of appendicitis are relapsing acute exacerbations, of short duration, moderate or no appreciable swelling at the seat of disease, and persistence of soreness and tenderness in the region of the appendix during the intermissions.

(6) The process of obliteration may begin at the distal or proximal end, or at any place between, or it may commence simultaneously, or in succession at different points.

(7) Obliteration on the proximal side gives rise to retention of septic material, which finds an outlet through the lymphatics, giving rise to non-suppurative lymphangitis and lymphadenitis.

(8) Circumscribed plastic peritonitis is an almost constant concomitant of appendicitis obliterans, and hastens the process of obliteration.

(9) Complete obliteration of the lumen of the appendix results in a spontaneous and permanent cure.

(10) In view of the prolonged suffering incident to a spontaneous cure by progressive obliteration and the possible dangers attending it, a radical operation is indicated, and should be resorted to as soon as a positive diagnosis can be made.—*The Journal of the American Medical Association.*

RESECTION OF THE LIVER.

John Berg reports the case of an unmarried woman, aged 45 years, thin and delicate, but not cachectic. A solid, movable tumor, not quite as large as a hen's egg, was felt in the epigastrium. Laparotomy showed this to be a retention cyst, situated toward the anterior portion of the inferior border of the left lobe of the liver. It was removed by two incisions in the base of the "liver-tongue," placed so as to form a wedge-shaped wound surface about ten centimeters in length. There was moderate bleeding, but ligature was unnecessary. Catgut sutures were applied close to one another. Perfect recovery followed.—*Hygiea*, vol. lv., 12, pp. 590-602.

THE USE OF STRONG CARBOLIC ACID IN SURGERY.

At a recent meeting of the Philadelphia Academy of Surgery, Dr. Oscar H. Allis read letters received by him from distant physicians detailing the favorable effects observed by them from the application of carbolic acid in full strength in burns, buboes, boils, and inflamed glands. He himself called special attention to the use of liquid carbolic acid, full strength, or, if the crystals are used, only enough water added to make a solution, as an

immediate application to all varieties of burns. To think of applying to a raw and agonizing burn that which would scald a healthy cutaneous surface would seem to the unreflective mind a reckless and wantonly cruel act. But when we consider that a raw burned surface is painful from its exposed nerve-filaments, and that the strong acid combining with the albumen of the tissues forms a coating that excludes the air, while, at the same time, it benumbs—paralyzes—each terminal exposed nerve-filament, the remedy seems to be the result of a happy inspiration.

He urged a careful use of the drug in deep sinuses, no matter in what direction they run nor how deep they may penetrate.—*Annals of Surgery*.

DESCRIPTION OF A NEW METHOD OF MAKING THE INCISION IN THE ABDOMINAL WALL IN CASES OF APPENDICITIS.

Dr. Chas. McBurney, in a recent number of the *Annals of Surgery*, suggests a new method of making the opening in the abdominal wall in operating for appendicitis. Inasmuch as there is no division of muscular fibres in operating by this method, the danger of eversion of the peritoneum and the formation of a hernial pouch would appear to be lessened.

The skin incision should be made in the usual way, directly over the appendix. The section of the external oblique muscle and aponeurosis should correspond, great care being taken to separate these tissues in the same line, *not cutting any fibres across*. This is easily accomplished.

When the edges of the wound in the external oblique are now strongly pulled apart with retractors, a considerable expanse of the internal oblique muscle is seen, the fibres of which cross somewhat obliquely the opening formed by these retractors. With a blunt instrument, such as the handle of a knife or closed scissors, the fibres of the internal oblique and transversalis muscles can now be *separated*, without cutting more than an occasional fibre, in a line parallel with their course—that is, nearly at right angles to the incision in the external oblique aponeurosis. Blunt retractors should now be introduced into this in turn and the edges separated.

The transversalis fascia is thus well exposed, and is then divided in the same line. Last of all, the section of the peritoneum is made.

Two sets of retractors must be in use, one holding open the superficial wound from side to side, the other separating the edges of the deeper wound from above downward. A considerable opening is thus formed, through which, in suitable cases, the caput coli can be easily handled, and the appendix removed. The appendix having been taken away, the wound in the peritoneum, which is transverse, is then closed by suture. The similar wound in the fascia transversalis is also sutured. The fibres of the internal oblique and transversalis muscles fall together as soon as the

retractors are withdrawn, and with a couple of fine catgut stitches the closure can be made more complete. The wound in the external oblique aponeurosis is sewed with catgut from end to end. When the operation is completed, it will be seen that the gridironlike arrangement of the muscular and tendinous fibres, to which the abdominal wall largely owes its strength, is restored almost as completely as if no operation had been done. In performing this operation I have noticed several advantages.

In the first place, muscular and tendinous fibres are separated, but not divided, so that muscular action cannot tend to draw the edges of the wound apart, but rather to actively approximate them. Excepting during the incision of the skin, almost no bleeding occurs. The fascia transversalis not being drawn away by the retraction of the deepest layer of muscular fibres, this fascia is easily completely sutured, and thus greater strength of repair is assured. No muscular fibres or larger nerves having been divided, pain after operation is almost absent. The operation requires rather more time than the usual one, and a larger number of assistants is needed, for four retractors are in use during part of the time. The opening into the peritoneal cavity is not large, but may be made larger, if necessary, by continuing the separation of the fibres of the internal oblique and transversalis, and dividing the conjoined aponeurosis in the same line with scissors. In the opposite direction the separation of muscular fibres may be carried as far as the crest of the ilium.

I present the method now, hoping that others may be induced to give it a trial.

This operation does not appear to be suitable for cases accompanied by suppuration about the appendix, which require to be treated by extensive packing with gauze, nor in cases non-suppurative which require during operation a large intra-abdominal dissection.

It is not an easy operation, and should not be attempted by those who are unfamiliar with operations upon the appendix, and I again call attention to the fact that in performing it two extra assistants will be occupied part of the time with retractors.

THE USE OF SULPHUR IN SURGERY.

In the *Lancet* for April 7, Mr. W. Arbuthnot Lane, assistant surgeon to Guy's Hospital and to the Hospital for Sick Children, London, refers to a short paper published by him in the *Medical Week* for December 8, 1893, entitled "How far is sulphur likely to be of service to the surgeon?" wherein he had described two cases of very extensive tuberculous disease of the hip and elbow in which sulphur had been used with very satisfactory results, since both patients had recovered rapidly and perfectly. Mr.

Lane now repeats the summarized conclusions of that paper as follows : (1) Sulphur applied locally appears to exert no deleterious effect on the health of the individual. (2) It gives rise to products which are powerfully caustic in their action ; therefore it must be used in small quantities and with discretion. (3) It destroys all organisms, whether free in a space or growing in the surrounding tissues. (4) It acts much more powerfully upon recently incised structures than upon granulating surfaces. (5) Its action is rendered more uniform and general and less violent by mixing it with glycerine. (6) If used in any quantity, the drug must be removed within a day or two, and irrigation subsequently adopted.

Mr. Lane states that since he wrote that paper he has used sulphur very largely, not only in tuberculous conditions, but in other infective processes, and with the most satisfactory results. In the treatment of extensive tuberculous disease, with much destruction of bone, his rule is, if there is a well-defined cavity in the bone, to pack it with iodoform in the way described by him in the *Lancet* for July 15, 1893 ; if there is no such suitable space, and if it is impossible to remove all tuberculous material with certainty, he places an emulsion of glycerine and sulphur in the cavity, allows it to remain for twenty-four hours, and then irrigates daily for a time with a weak solution of mercury bichloride or with a sterile normal saline solution. He thinks its action is seen to the best advantage, perhaps, in recent foul wounds, with extensive laceration and bruising. He relates a case illustrative of this. A man, thirty years old, was admitted into Guy's Hospital, under his care, on February 11. While cleaning a window he had fallen forty feet. His forearm had been transfixed on a spike of the area railing, and he had been suspended upon it. The skin and muscles of the forearm were found extensively lacerated along the whole of its length, and portions of the man's coat, which was very dirty, were found imbedded among the "pulped" muscles. Such portions of the muscles as were very much mashed and soiled were removed. The ulnar artery was not injured. The damage to the soft parts was so extensive and the fouling so considerable that the author believed that, however thoroughly the parts might be washed with germicidal lotions alone, amputation would soon become necessary. Therefore, after cutting away some parts, cleaning up others, and removing the foreign matter present, he introduced everywhere into and between the lacerated tissues gauze saturated with an emulsion of sulphur and glycerine. At the end of twenty-four hours this was removed ; the wound was then found to give out a decided odor of sulphuretted hydrogen, and the tissues were covered with a soft, black slough. Irrigation with a weak bichloride-of-mercury solution was used daily, and the intervals in and between the lacerated muscles were packed with cyanide gauze. The slough soon

separated, leaving a healthy granulating surface. The highest temperature recorded was 100.6° F., during the evening following the operation. The author says there is little or no doubt in his mind that such a result could not have been obtained by means of the germicides in general use.

Mr. Lane's experience is that there is no topical remedy so perfectly satisfactory in its results in cases of lupus as sulphur, whether in the form of powder, emulsion, or ointment. In every case in which he has used it a rapid cure has resulted, with practically no destruction of tissue other than the lupus tissue. In case of cancerous or sarcomatous ulceration, he says the destruction of the soft parts can be regulated and determined very accurately. Unlike the escharotics in common use, sulphur has practically no effect on healthy cutaneous or mucous surfaces, but requires the action of a granulating raw surface to determine the formation of sulphurous and sulphuric acids, which are apparently the agents that influence the vitality of the organisms and tissues with which they come in contact. Mr. Lane has also found sulphur most useful in the foul ulcerative stomatitis which is so common among the children of the poor, and so obstinately resists the local treatment usually adopted. In such cases, if gauze or wool dusted abundantly with the finely powdered drug is retained in firm contact with the foul ulcerated surface for an hour or two, sufficient destruction results to clear the surface of its infective organisms, and it then heals rapidly. Should one application not produce a sufficient result, others may be resorted to, the number depending on the extent and locality of the ulceration, the facility with which the plug can be retained in position, etc. He has found applications of sulphur equally effectual in destroying the micro-organisms that produce the foul impetiginous ulcers seen in children. Sulphur, like iodoform, says Mr. Lane, becomes active as a germicide, and is very considerably more powerful in its action than iodoform, only when in immediate contact with a raw surface, the living tissue causing it to form certain combinations with hydrogen and oxygen. In this connection the author refers to Dr. Ray-Pailhade's experimental researches on philothion, a substance which that writer infers to exist in living tissue and to be capable of combining with sulphur. — *New York Medical Journal*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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VARIOCELE AND ITS RADICAL CURE. (SAMUEL MILLIKEN, 1894.)

The author prefers the excision of the veins to their subcutaneous ligation. He recommends the use of only absorbable ligatures and sutures, strict antisepsis, and no drain. The patient should remain in bed a week.—*Revue Internationale*.

PEPTONURIA.

The occasional occurrence of peptone in the urine has long been recognized, but its exact diagnostic and prognostic importance has been uncertain. With a view to throwing some light upon this subject, Robitschek (*Zeitschr. f. klin. Med.*, 1894, xxiv., 556) has examined carefully the urine of 121 patients suffering from various disorders, with the result of finding peptone in the urine of 60 of them. He believes that peptonuria occurs physiologically only during the puerperium, and that its occurrence at any other time is to be regarded as pathological. As a rule, it is indicative of tissue degeneration, as the result of which peptone finds its way into the blood, and is excreted by the kidneys. The mere presence of peptone in the blood and in the urine seems to have no special symptoms associated with it; and, as it occurs in a great variety of conditions of which tissue degeneration is a part, its diagnostic significance is thought to be but slight.

AN OPERATION FOR THE RADICAL CURE OF FISTULA.

Dr. Augustin H. Goelet, of New York, in the *American Medico-Surgical Bulletin*, July 1st, describes an improved operation for fistula in ano which does away with the usual troublesome after-treatment in these cases by securing primary union, and affords complete retentive power even if

there are two fistulæ and the sphincters must be divided in two places. This result he obtains by carefully uniting the raw surfaces by means of sutures, introducing first buried catgut continuous sutures for the deeper structures, including the muscles, and separate, interrupted sutures of chromic gut for the mucous membrane and perineum.

He emphasizes the importance of previous divulsion of the sphincter, strict asepsis, thorough curettage of all fistulous tracks, the use of buried sutures for uniting the deeper structures and separate superficial sutures for the mucous membrane only, and inactivity of the bowels for five days following the operation.

In favor of this method of suturing, as against the introduction of sutures through the mucous membrane of the rectum to include the deeper structures, the danger of infection by leakage along the track of the suture is avoided, as well as obstruction to the circulation and consequent edema, which would interfere with primary union.

OPERATIVE INDICATIONS IN TRAUMATIC STRICTURE OF THE URETHRA.

Drs. Legueu and Cestan gave the results of their observations on cases seen in the service of Professor Guyon. There were seventeen cases in the wards almost simultaneously. The lesion most often sustained is as follows: The ruptured portion of the urethra is usually on its lower wall, and the upper is either intact or else there is at least a strip of unruptured mucous membrane at this point. On this account operations are not to be done in these cases which contemplate a complete division of the canal. The obstruction in old cases comes at times from fibrous masses which are separated from the urethral canal by a less dense tissue, thus allowing of their removal without injuring the urethra. Excision *en masse* is to be avoided for the same reason. When there is no fibrous mass to be felt in the perineum, then dilatation may be tried; but when they exist, then dilatation is only to be used as an adjunct to other measures. Internal urethrotomy may be done as a primary measure when dilatation is impossible, or it may be employed as a secondary measure after dilatation has failed. Internal urethrotomy is not regarded as curative, it being often followed by a return of the obstruction. In the milder cases, in which the stricture is small in extent, it sometimes succeeds admirably. In performing external urethrotomy, when the wound is deep and it is impossible to find the urethra, one of two courses may be pursued: One is to allow the patient to recover, and watch, when he urinates, where the urine comes from, and the other is to do a suprapubic cystotomy and retrograde catheterization at once. The latter is mentioned favorably. Resection of a part of the urethra and immediate suture are advised when the two parts

are not separated too widely, too deeply situated, or too much surrounded by hard cicatricial tissue. In some cases a new urethra is constructed by uniting the sound tissues over a catheter. This is left in place three to five days. The surrounding callosities must all have been carefully removed, and all granulations carefully curetted away.—*University Medical Magazine*.

GERSUNY'S OPERATION FOR INCONTINENCE OF URINE IN WOMEN.

“ This operation consists in freeing the anterior portion of the mucous membrane of the urethra from the surrounding parts by an incision, twisting it more or less, and fixing it in its twisted condition by means of sutures. At a recent meeting of the *K. k. Gesellschaft der Aerzte*, of Vienna, a report of which appears in the *Wiener klinische Wochenschrift* for May 10th, Dr. Hofmokl related the case of a woman, twenty-seven years old, on whom he had performed this operation, twisting the urethra to the extent of 180° . Up to the time of the report, about a month after the operation, she had had perfect control of the urine. In the discussion Dr. von Frisch mentioned several cases in which the operation had been performed, in one of which, done by himself, the twisting had been carried to the extent of a complete turn. In this case the benefit of the operation had lasted for about six weeks. It seems from this and his further reports that the good effect of the operation is apt to be only temporary.—*New York Medical Journal*.

THE OPERATIVE TREATMENT OF TUMORS OF THE BLADDER.

Dr. Frisch believes that the best information concerning the position the diagnosis, and operativity of tumors of the bladder can be obtained by the cystoscope. Benign tumors, even when they are multiple, and have their seat in the lower portion of the bladder and around the opening of the ureters, are operable and the prognosis is good. There are also forms of carcinoma, in which the infiltration is limited to the walls of the bladder, that are operable. Naturally, all operative measures are of the nature of resection, perhaps eventually total extirpation of the bladder. The prognosis in all forms of carcinoma of the bladder is doubtful. The wholly inoperable are those in which there is not alone infiltration of the bladder-wall, but the tissues around the bladder. He believes that the chances for recovery in operations on the bladder for carcinoma are becoming more favorable every year.—Report of the Society of Physicians, Vienna, in *New York Medical Record*.

PEROXIDE OF HYDROGEN FOR THE PREVENTION OF SYPHILIS AND CHANCROID.

The experiments of Krowczyueski, Uhma, and Swiatkrewicz are based upon the fact that the secretions from chancroids and recent syphilides are alkaline, and that soft chancres, and especially primary syphilitic ulcers, are rare inside of the prepuce, since the normal secretion there is acid. The experimenters, therefore, tried a mixture which was acid and strongly disinfectant without being a caustic agent. Ulcer-secretion was mixed with 1 to 4 drops of a 6 to 8 per cent. solution of peroxide of hydrogen and inoculated in the forearm. Fourteen out of fifteen such inoculations did not "take," whereas the same persons inoculated with chancre-secretion without the mixture all "took." In a person inoculated with chancre-secretion, mixed with peroxide of hydrogen, rendered alkaline by potash-lye, a chancre was produced. Inoculations with the secretion from primary syphilitic ulcers and syphilitic warts mixed with the original acid compound failed. Two healthy physicians allowed themselves to be thus inoculated, and syphilis did not follow.—*Medycyna*, No. 1, pp. 11, 12, 1893. J.A.A.

ALBUMINOID SUBSTANCES OF MILK. (ARTHURS.)

Milk contains albuminoid substances other than caseine, so say Hammarsten and Sibelien, contrary to the opinion of M. Duclaux. Among other proofs, milk treated with a moderate quantity of acetic acid precipitates the caseine; the filtered fluid gives a coagulum with heat; the coagulum is insoluble in fluorate of sodium, and is not caseine (cow's and goat's milk). Milk fluorated at 1 per cent., subjected to dialysis in the presence of distilled water, precipitates its caseine. The fluid separated from this precipitate contains other albuminoid substances. Boiled, it produces flakes, which, separated by filtration and washed, are insoluble in sodium fluorate. It is, therefore, not caseine (cow's milk). These coagulable substances are an albumin and a globulin.—*Revue Internationale*.

PATHOLOGY

IN CHARGE OF

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FEVER.

With the development of our knowledge of the acute infectious diseases has arisen the theory that the fever occurring as a part of their clinical picture is the result of the action on the body of certain diffusible products of bacteria which are their cause. With a view to adding definiteness to this theory, Centanni (*Deutsch. med. Woch.*, 1894, Nos. 7 and 8) has undertaken an exhaustive study of the fever of the infectious diseases, his investigation being directed to the determination of the following points: (1) What are the agents which cause the fever in these diseases? (2) What is the mechanism by which they act? (3) What therapeutic deductions are possible from the facts developed? The work is not yet completed, but a number of facts bearing upon the first question have been discovered, and form the basis of a preliminary paper upon the "Fever-producing Poison of the Bacteria."

The investigation extended to seventeen pathogenic species, seven non-pathogenic, and to cultures made from air, water, putrefying animal matter, and urine, without any attempt to separate or identify the several species. From cultures of these germs, *devoid of peptone*, Centanni obtained, by repeated precipitation with alcohol and dialysis, a substance whose chemical properties are quite distinct from those of the bacterial poisons heretofore described (ptomaines, enzymes, toxalbumins), which, when injected into animals, causes fever, prostration, loss of flesh, and finally death, if continued. This substance, which Centanni believed to be the same in all species of bacteria, is designated by him "pyrotoxina bacteria." It is believed to be in some way derived from the protoplasm of the germs, or to be elaborated by it, and its production is thought to be

a quality of all bacteria. He is led to believe that the fever accompanying the acute infectious diseases in man is due to an intoxication of the system by this poison, and explains the irregular course of the fever in the different diseases by the theory that the poison depends for its elaboration upon variable conditions, and that it is these conditions which are different in the various diseases, and at different times in the same disease, not the poison.—*American Journal of the Medical Sciences.*

COMPARISON OF THE BLOOD OF THE INFERIOR VENA CAVA WITH
ARTERIAL BLOOD AS TO QUANTITY OF FIBRIN EACH IS
CAPABLE OF PRODUCING. (DASTRE.)

The blood from the inferior vena cava supplied quite a notably smaller quantity of fibrin than arterial blood (0.260 instead of 0.385, and 0.728 instead of 0.869). It is notably poorer in globulin-fibrinogen than in arterial blood.—*Revue Internationale.*

COMPARATIVE TOXICITY OF THE BLOOD AND VENOM OF THE VIPER.
(PHISALIX AND BERTRAND.)

These researches confirm the results obtained by the authors on the toad and salamander, and allow of the following conclusions being drawn. The blood of the viper, as of these other animals, contains toxic principles analogous to those found in the venom, having the same chemical properties (insoluble in alcohol), and physiological (troubles in the nervous system, particularly vaso-motor, progressive cardiac weakening, lowering of blood pressure following the general vaso-dilation, interference with exertion, pyrexia). As in the toad, we can admit that the immunity of the viper to its own venom is due to some of its own secretions, by special glands, active principles that impregnate the organism and produce a *habit* to excessive doses of this terrible poison.—*Revue Internationale.*

CUTANEOUS ABSORPTION. (FUBINI AND PIERINI.)

The various experiments done by the authors go to show that the healthy skin does not absorb non-volatile substances. After immersions of both arms and forearms for half an hour in five per cent. solutions of sodium salicylate, and five per cent. solutions of potassium iodide, the urine contained neither salicylic acid nor iodine. The posterior extremities of guinea pigs were immersed for one hour in a two per cent. solution of nitrate of strychnine and a 1 in 400 solution of sulphate of atropine without strychninic symptoms, and without mydriasis.—*Revue Internationale.*

FASTING, THE PANCREAS AND THE SPLEEN. (HARZEN.)

Apropos of an article by M. Dastre on the dissociation of the amyolytic and proteolytic ferments of the pancreas, M. Harzen recalls some facts observed by M. Schiff and himself, which cause them to allow of an influence of the spleen on the peptonizing action of the pancreatic juice, or on an infusion of the pancreas. Active trypsin does not begin to become abundant in the pancreatic juice until four or five hours after the ingestion of food, exactly at the time that the spleen habitually begins to become congested, and lacks when the spleen is extirpated. The addition of an infusion of congested spleen or of venous blood of a congested spleen to an infusion of pancreas that is digesting slowly causes the pancreatic infusion to digest rapidly.—*Revue Internationale*.

UNNA-TANZER'S METHOD OF FINDING ELASTIC FIBRES IN SPUTA.
(G. GATTI.)

This observer has compared Unna-Tanzer's method with the method by potash and Fenwick method with potash and boiling as to results. The following is his technique. A good quantity of sputum is placed on a slide, and dehydrated for a few hours in absolute alcohol, then left for three hours in Unna's fluid: Orceine, grs. 0.1; alcohol, at 90°, 22 c.c.; hydrochloric acid, eight to ten drops. Wash in water; absolute alcohol, xytol, balsam. This method is much superior to those previously used to find elastic fibres, in the clinic and in finer pathological research.

(1) He found elastic fibres in one out of three cases of emphysema, an affection in which they had not before been mentioned.

(2) In two out of three cases he made them out in resolving pneumonia (Jakoch).

(3) He found them in four cases where the other methods had not brought them out.

(4) When they are made out by the other methods, they are, by this one, more surely made out, and are seen to be more abundant. Another advantage over the Fenwick method, which requires twenty-four hours, is its comparative brevity, requiring only a few hours.—*Revue Internationale*.

EXCESSIVE INTESTINAL PUTREFACTION.

Dr. C. A. Herter read a paper with this title. He stated that the facts brought to light two years ago, regarding the occurrence of excessive intestinal putrefaction in epileptics, had stimulated an inquiry into the occurrence and character of putrefactive processes in the intestine in other conditions than epilepsy. This inquiry made it clear that deviations from the normal character and degree of this putrefaction were met with in

association with a variety of morbid states. It had long been known that a variety of aromatic substances, including indol, phenol, etc., were produced by the action of anaërobic bacteria upon the proteids, and also that this process occurred normally, to some extent, in the intestine when nitrogenous food was introduced. Careful observations were made, with the aid of an expert chemist, upon the ethereal sulphates in forty cases of epilepsy, eight of melancholia, and eight of Bright's disease, and in a number of cases of anemia, pernicious anemia, leucocythemia, catarrhal jaundice, exophthalmic goitre, and many other diseases. The author deduced the following conclusions, as a result of his investigations: (1) An excess of the ethereal sulphates in the urine was evidence of excessive putrefaction of proteids in the intestine, the exceptions to this being in cases of suppuration with free drainage, and where such drugs as creasote and salol had been administered. (2) The indigo-blue of the urine was not necessarily proportional to the ethereal sulphates, and was to be regarded as due to a special form of putrefactive decomposition. (3) The regular occurrence of more than a trace of indigo-blue was to be regarded as pathological, although in robust persons there might be very little evidence of disordered digestion for a time. (4) The presence of indigo-blue in the urine of children was no evidence of the existence of a tuberculous process. (5) Intestinal flatulence was oftener associated with intestinal putrefaction than any other symptom of intestinal indigestion. Epigastric pain and tenderness, the sense of emptiness and nausea, bore no relation to the ethereal sulphates. (6) Both constipation and starvation might increase the putrefactive products in the urine. (7) Epilepsy, acute melancholia, and chronic Bright's disease were usually associated with excessive intestinal putrefaction. (8) The treatment of excessive intestinal putrefaction by means of drugs was at present unsatisfactory. (9) The use of rare beef and of milk, and the exclusion, as far as possible, of vegetable nitrogenous food, were important and effective means of reducing intestinal putrefaction, and of relieving symptoms of intestinal indigestion. (10) The relief of intestinal symptoms could not be ascribed wholly to the effects of a milk-and-beef diet, for such diets reduced the excess of uric acid, which was observed in many cases of intestinal indigestion. (11) The treatment of epilepsy by means directed to the intestinal condition led, in many cases, to a reduction in the number of seizures, and to marked improvement in the general health. (12) It was probable that in some cases of epilepsy in children the early seizures were determined by intestinal derangement, and that certain treatment directed to the correction of the putrefactive excess might greatly improve or even cure some cases, in the sense of preventing the establishment of the epileptic habit.

HYGIENE AND PUBLIC HEALTH

IN CHARGE OF

WILLIAM OLDRIGHT, M.A., M.D. Tor.,

Professor of Hygiene in the University of Toronto ; Surgeon to St. Michael's Hospital ;

AND

E. HERBERT ADAMS, M.D., D.D.S.

TORONTO'S SEWAGE SYSTEM AND WATER SUPPLY.

The question of a trunk sewer and improvements in Toronto's water supply are again attracting considerable attention among some of Toronto's leading citizens, and a public meeting has been called to discuss the situation. There is no time better than the present for building a trunk sewer, or, indeed, for starting any other needed public work, as it will afford work for a large number of the unemployed of the city. Mayor Kennedy is heartily in sympathy with the idea of a trunk sewer, and it is to be hoped that this great sanitary need for Toronto will shortly be satisfactorily accomplished.

THE PURIFICATION OF SEWAGE

is evidently on the eve of great extension in this country, writes Colonel Waring (*Century* for April), and its success requires that the importance of making it as thorough as possible should be generally appreciated. If the work is to be done at all, it is worth while to do it well. Half-way measures, like chemical precipitation, may satisfy present legal demands, and they may, in exceptional cases, be advisable ; but they will not meet the requirements of the better informed public opinion that is now growing up. The means for entire purification are within reach, and imperfect results will not long be accepted as sufficient.—*Sanitarian*.

THE SEWAGE OF PARIS.

A bill is now before the Chamber of Deputies to enable the city of Paris to negotiate a loan of 117,000,000 francs for the purpose of develop-

ing a sewage farm, and for the construction of sewers therewith. By this it is proposed to prevent the pollution of the Seine, and thus remove a fruitful source of disease.

The authorities have the wisdom to discern that if Paris shall continue to be, as she is now, a great centre of attraction for pleasure-seekers, she must be not only a city of beauty, but a city of health. For the securing of this end any needful amount of expenditure will be fully warranted.—*Sanitarian.*

M. PASTEUR, in speaking recently at the Paris Council of Hygiene, remarked that "it is proposed not to conduct to the sea the pathogenic germs of the numerous contagious diseases which decimate all our population, but to accumulate them each year more and more on the fields situate at the gate of the great town, and these fields will be cultivated. It would be better if the fields remained uncultivated, for then you would not incur the risk of bringing the germs back."

THE UTILIZATION OF GARBAGE.

Dr. Bruno Terne, in a paper read before the clinical section of the Franklin Institute, advocates the utilization of garbage as a fertilizer. He says that for the sake of convenience we pollute our rivers, and choose rather to suffer the consequences of drinking polluted water than to adopt rational measures to save for the enrichment of our fields the products which the law of nature has provided for the very purpose. He admits that cremation is unquestionably the most complete system for destroying all organic substances, and, doubtless, to the extreme sanitarian, the only method that should be adopted.

But what about economical results? The daily operation of the furnace requires labor and fuel; the product of a crematory is a small quantity of ashes, and worthless at that. Four or five per cent. of ashes is all that remains of the garbage when incinerated. He considers that there is no danger to the public health in the conduct of a rational system for the utilization of garbage, as all microbic carriers of contagious sicknesses are destroyed by a temperature of 212° F., and the dry product produced is as harmless to the public health as the flour in the barrel.

A NEW SYSTEM OF DISPOSING OF HOUSEHOLD REFUSE.

A new system of disposing of household refuse is being tried in Chicago. Instead of taking the refuse to the destructor, the destructor is brought to the refuse. This destructor is mounted on four wheels, and

consists of a cylindrical body constructed out of wrought iron, and containing the furnace proper and drying chamber, in which the refuse undergoes a preliminary desiccation, and an ashpit. The fuel used is crude petroleum, with which a very high and easily regulated temperature is obtained. It is reported that the destruction of the refuse is complete, and that one of these portable destructors is capable of replacing fifteen of the collecting carts hitherto in use.—*Sanitary Record*.

A DISEASE-PROOF SUIT OF CLOTHES.

A "disease-proof" suit of clothes, intended to be worn by an operating surgeon, has been patented at Washington. According to the description given of it, it is a complete suit of rubber armor, resembling the dress of an ordinary diver, and is constructed on air-tight principles, so that no disease germs can enter. There is a small pair of bellows beneath each foot, which, being compressed by the action of walking, blows fresh air in an ingenious manner through the armor. This air enters and is filtered through a germ-proof diaphragm under each of the feet, passing upward and out through another diaphragm arranged at the top of the head.

NATIONAL REGISTRATION OF PLUMBERS.

There are many reasons in favor of the national registration of plumbers. The healthiness of the houses in which we live is to a great extent dependent upon the efficiency of the plumbing work connected with them. For plumbers themselves national registration offers great advantages; to the public at large it offers still greater advantages. A registered plumber may confidently expect to be chosen rather than one who is unregistered, and the public, in employing registered men, have a guarantee that they are employing men who know their work. We observe that Mr. Edwin Steward, in a communication to a conference of sanitary authorities, points out that "architects should aim at using their opportunities for advancing the plumbing craft by endeavoring to employ registered plumbers, both masters and operatives."—*Sanitary Record*.

Editorials.

INDEPENDENCE OF PARLIAMENT.

AN incident that recently occurred at Ottawa shows that the Parliament of Canada, with all its faults—and some say they are many—has certain ideas as to honor and rectitude in its relations with its members which are supposed to meet with general approval. Mr. Harry Corby, M.P., West Hastings, is the owner of a large distillery in Belleville, and it happened in the ordinary course of business that his clerks, without his knowledge, supplied the Department of the Inland Revenue with a comparatively small amount of methylated spirits. When he accidentally discovered that the mistake had been made, he went at once from Montreal (where he happened to be staying) to Ottawa, appeared before Parliament, apologized for his unintentional error, and immediately thereafter handed in his resignation. This appears to have been considered the right thing to do. We will not discuss the matter, but will simply ask the Ontario Medical Council if there is any special reason why the medical parliament at Toronto should not be kept as decent and respectable as the larger Parliament at Ottawa?

DR. SANGSTER AND THE EX-PRESIDENT OF THE COUNCIL.

DR. CAMPBELL, the retiring president, delivered an address at the last meeting of the council. Dr. Sangster, the secretary of the Defence Association, has published a letter in reply. Both of these productions are able in their way, but for scorching satire and biting sarcasm Dr. Sangster's communication surpasses anything we have seen in Canadian literature for some time. His writings are always able, although sometimes rather verbose, but are often tinged with a bitterness which is quite unnecessary, and frequently foreign to his main line of argument. His insinuation as to the presumption and audacity of Dr. Campbell, a homeopathist, in addressing the regular profession, is scarcely courteous or just. Dr. Campbell was speaking to the profession of this province, not as a homeopathist, but as president of the College of Physicians and

Surgeons of Ontario, and, as such, had a right to defend the body over whom he presided, if he thought it worthy of a defence, and criticize the arguments and actions of its opponents, if he thought fit.

Apart from purely professional considerations, the ex-president is a man of undoubted respectability and acknowledged ability. His recent address was good, but he appeared to consider it his duty to defend all the actions of the outgoing council, whether right or wrong. He spoke as an advocate with a brief in his hand, not as a judge who should review all matters from every point of view. Dr. Sangster replies as an opposing counsel, and is equally extreme in his methods of reasoning. It is a fight without gloves between the government and the opposition. If both sides are well represented in the next council, the fight will, probably, go merrily on, and, if it does nothing better, will at least furnish plenty of amusement for "the gallery."

ATTENDING PHYSICIANS AND CONSULTATION FEES.

THE Philadelphia *Medical News* (June 16th, 1894) expresses the opinion that in consultations the attending physician is entitled to a consultation fee in addition to his ordinary visiting fee. Many physicians, on the other hand, entertain the opinion that the attending physician, under these circumstances, is only entitled to his fee for an ordinary visit. It is hard to lay down any fixed rule on the subject, but it is only fair that the attending physician should receive some extra remuneration for a consultation, because he has to come at a fixed hour; he has to remain a longer time than usual; he assumes a serious responsibility (as the *News* says), because, in case of irreconcilable opinion, it is his opinion that must prevail if he remains in attendance.

The following opinion expressed by the *News* is worthy of serious consideration: "The whole visiting fee system is ridiculous, and no other body of professional men would submit to it. The physician should charge, as does the lawyer or the architect, in proportion to the importance of the case, the skill possessed and required, and the time, labor, and anxiety involved. Surgeons, at least the tip-top ones in city and country, do this for operative work, and physicians should do the same in medical cases. A fee that may be large for the treatment of a case of simple diarrhea may be ridiculously small for a grave case of typhoid fever or pneumonia. A single visit by a man who is able to diagnosticate a case—let us say of concealed aortic aneurism—is worth more than hundreds of visits by a man who mistakes the case—let us say for laryngitis. The man who removes a diseased uterus has not rendered any greater service than the man who restores to function a diseased lung, and the latter should be equally well paid."

CONTRACT AND LODGE PRACTICE.

IT will be noticed, by referring to the last issue, that a special committee was appointed at the meeting of the Ontario Medical Association to report on the matter of lodge practice. After considering the question carefully, the committee presented their report to the effect that club, lodge, and contract practice were evils that should be abolished as soon as possible. A friendly and interesting discussion followed, and the report was adopted.

We are glad that there is a general feeling of opposition to certain classes of club and lodge practice, if not to all kinds of such practice. But there seems to be a certain amount of difficulty in deciding definitely as to what classes of contract practice are objectionable. As far as we understand the meaning of the word "contract," every member of the profession in actual practice enters into contracts. The surgeon undertakes to perform an operation, the accoucheur undertakes to conduct a case of midwifery, each for a fixed sum. The surgeon or physician of an asylum or gaol undertakes to treat all the patients in one or other for a fixed sum. The surgeon of a railway company undertakes to do certain work for a sum which may be fixed or may vary according to circumstances. These will be generally considered as contracts which are justifiable. We believe, however, it will be generally conceded that no physician or surgeon of any corporation has a right to interfere with the private practice of a brother practitioner. Take, for instance, the surgeon of an accident insurance company. Such a surgeon should certainly be allowed to see the patient, and report for his company; but he should always respect the rights of the practitioner in attendance. Friction frequently arises in such cases, and unpleasant results not unusually follow. Every effort should be made on both sides to avoid even the appearance of selfish or unprofessional conduct.

CANADIAN MEDICAL ASSOCIATION.

ELABORATE preparations are being made in St. John, N.B., for the reception of the Canadian Medical Association on August 22nd and 23rd next. The gathering will probably be one of the largest the association has ever had. From reports that come in from time to time, it is believed that the profession of the Maritime Provinces will turn out almost to a man. From Montreal, Toronto, and points further west there will be large delegations.

The following are some of the papers promised: "Cases in Practice," R. J. McKechnie, Nanaimo, B.C.; "A Year's Experience in

Appendicitis," Jas. Bell, Montreal; "A Case of Tuberculosis of the Arm of Fourteen Years' Standing Cured by Inoculation with Erysipelas," W. S. Muir, Truro, N.S.; "The Treatment of Diseases of the Ovaries and Fallopian Tubes," A. Laphorn Smith, Montreal; "Intestinal Antisepsis in Typhoid Fever," D. A. Campbell, Halifax, N.S.; "The Use and Abuse of the Various Cautery Agents in the Treatment of Nasal Affections," E. A. Kirkpatrick, Halifax, N.S.; "The Present Status of Asthenopia," F. Buller, Montreal; "Eye-strain Headaches," J. H. Morrison, St. John, N.B.; "Note on Epilepsy," W. H. Hattie, Halifax, N.S.; "Influence of Mind on Disease," J. A. McLeay, Watford, Ont.; "Miners' Heart," R. A. H. MacKeen, Cow Bay, Cape Breton, N.S.; "Address in Surgery," J. F. Black, Halifax, N.S.; paper (title not at hand), E. A. Praeger, Nanaimo, B.C.; "Some Functional Derangements of the Liver," J. E. Graham, Toronto; "Treatment of Certain Forms of Uterine Hemorrhage," F. T. Bibby, Port Hope; "Address in Medicine," Wm. Bayard, St. John, N.B.; "Ophthalmic and Aural Cases," Stephen Dodge, Halifax, N.S.; "Notes on Treatment of Typhoid Fever," Dr. W. H. B. Aikins, Toronto.

Papers will be read in the order in which they are received by the secretary. It is important that those intending to contribute papers will communicate with the secretary at an early date.

THE ONTARIO MEDICAL COUNCIL.

THE Medical Council has been in rather a peculiar position during the last two or three years. It has been bitterly attacked by a large and powerful association, containing within its ranks many able and influential physicians. It has been defended by a medical journal, subsidized for the purpose, and edited by one of its own members. The combat has been a farce—hot loaded leaden bullets, well aimed, on the one side; blank cartridge, fired at random, on the other side. The ignominious defeat of the council is so patent to all impartial observers that extended comment now is needless. The friends of the council were sorry that negotiations between its officers and representatives of the Defence Association two years ago did not end in a compromise fairly satisfactory to all parties. The want of tact and good judgment which was exhibited on that occasion was almost stupendous in its grossness.

We have no intention at the present time to again discuss these matters in detail; but we desire to say a few words as to the general results of the council's legislation. It is only fair to urge that much good has been accomplished by this body since it came into existence. Notwithstanding

all that has been said to the contrary, there is no doubt that it has very materially raised the standard of medical education in this province. It has also done more than most people imagine in the way of repressing rank quackery. Some, while agreeing, at least in part, with this statement, say it should have done more. Perhaps, but remember the public dearly loves the arrant and loud-mouthed quack ; it wants free trade in medicine ; it delights to make a martyr of any impudent charlatan that is pursued *too vigorously* by our medical legislators. After watching the work of the Discipline Committee for the last few years, we have no hesitation in saying that it has done its work admirably, considering all the adverse circumstances with which it has had to contend.

The Education Committee has also, as a rule, done good work. The regulations and requirements of the curriculum, as they now stand, are a credit to the council, and will not suffer by comparison with those of any corporate body in any part of the world. The college contains a number of able and conscientious men, and, at the same time, a number about whom charity forbids us to speak. We hope the good ones will come back after the coming elections. Many new members will be elected, and the general impression appears to be that the next council will be an improvement on the last.

MEDICAL COLLEGES AND UNIVERSITIES IN RELATION TO THE ONTARIO MEDICAL COUNCIL.

THE secretary of the Medical Defence Association, in one of his letters to the *Toronto Empire*, July 2nd, has again attacked the schools and universities. We quote the following sentence: "Will you show by your votes that you are worthy of independence, that you seek and are anxious to enjoy the blessings of self-government, that you are resolved to be no longer the serfs or bondsmen or helots of petty, money-making corporations or their appointees, or will you prove that, in your opinion, you cannot get along without the tutelage and stepmotherly oversight of medical schools and universities?" . . . "The Medical Council was created in 1866, and its powers were amplified in 1869, not to conserve the privileges of medical practitioners, or to advance the welfare or to guard the portals of the medical profession, but solely to further the interests of the medical schools. That benefits have incidentally accrued therefrom is undeniable, but to claim that we owe any gratitude to the schools or to the projectors of the Medical Act for a proceeding conceived and perfected in pure selfishness on their part is simply absurd — is the outcome of mere sickly sentimentalism."

There is nothing new in these statements. Dr. Sangster has entertained us with them before. If he would kindly give some common-sense reasons for such bitter denunciations, it would relieve the monotony of his methods of warfare, and possibly throw some light on what appears to be a very dark subject. It is true that certain so-called "school men" did substantial work in the organization of the Medical Council. Dr. Henry H. Wright, of Toronto, probably did more than any other man. The late Dr. Dickson, of Kingston, materially assisted in the good work. We mention only these two names, because one has retired from school work, and the other is dead. Will any one have the assurance to contradict us when we say that two more honorable, unselfish, and high-minded men never graced the medical profession in this or any other country? Is it not possible to conduct a campaign without reflecting so seriously on the motives of such as they?

We would like to hear some sound reason why the schools and universities were likely to receive any commercial benefit from the formation of a council with its central examining board. The tendency of such a central board has always been to curtail their powers and diminish the numbers of students. It has been found most difficult, in other countries, to get the universities and other corporations to make concessions such as were made by our corporate bodies in Ontario. We claim no peculiar virtues for school men, as a rule; but we do think that the actions of those representatives of universities and colleges who assisted in the formation of our council should command the highest respect from all fair-minded men.

According to the recent amendments the university and school representatives will have no voice regarding the annual assessment, and will be expected simply to consider matters pertaining to the curriculum and the examinations. The curtailment of their powers was a concession to the Defence Association, and, we thought, was generally considered satisfactory. It has not, however, satisfied Dr. Sangster. It may be that he is wise in attacking, in the lay press, members of our profession whom we respect; it may be that he will succeed in turning the love which so many of our medical graduates entertain for their *alma mater* into bitter hatred; it may be that he will exalt the tone of our profession by his methods; it may be that his writings will form the most effective sort of campaign literature that the Defence Association can provide. We know not, but may learn in time.

Correspondence.

LODGE PRACTICE.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—Your correspondent, Dr. Bibby, in the June issue, expresses a “desire to direct the attention of the medical profession to the pernicious system of lodge doctoring throughout the country.”

By all means, if the doctor feels it his duty to engage in the home-mission labor of reforming medical practice, let his desire be granted ; but let him not forget that the value of such mission work is not enhanced by misleading and absolutely false insinuations, nor is lodge practice pernicious because it pleases him to so style it. The pernicious element lies rather with him who is too obtuse to comprehend the difference between a business transaction and the abuse of its privileges. If Dr. Bibby wishes to read a lecture to the profession, let him first acquire a knowledge of the facts, and be guided to his conclusions in a logically honest manner. What interest is it to the profession of Ontario that the lodge system “has become a perfect craze” in Port Hope?

Does Port Hope represent the whole earth to your correspondent? and does he imagine that the entire province is to become entangled in the petty vexations of local animosities? If the people of Port Hope desire to unite in mutual fraternity for the benefit of their families, is it becoming to the dignity of the medical profession to frustrate those honorable endeavors by raising the absurd and false cry of “unprofessional conduct”?

Does Dr. Bibby advise that the profession to which he belongs shall thrust itself as an obstacle in the way of a great philanthropic organization? Does he foolishly imagine that the 2,200 or more physicians of Ontario hold in their grasp, as a puppet to play with at their pleasure, an organization of more than 15,000 C.O.F., more than 36,000 I.O.F., besides thousands more I.O.O.F., A.O.U.W., S.K., K.P., and heaven only knows how many more? This a craze that has a wider spread than the limited corporation of Port Hope. As a great institution in this country, it has not grown by confining itself to narrow limits ; and the men who control benefit societies may safely be classed among the broad-minded, prac-

tical business men of the day, who are untrammelled by the annoyance of local jealousies, and the childish hallucination of professional importance.

"There are a great many societies (in Port Hope), nearly all of which have lodge doctors galore." And suppose they have, are they not entitled to organize and conduct business without consulting the medical profession? And because they contract with a physician at a stated salary, shall he be obstructed in the discharge of legal duties because his professional business opponents decline to endorse his contract? And because that physician attends a member of the lodge for a dollar a year or less, how is the dignity of the profession endangered? Does the new popery base its dignity on its financial tariff? What must be the odium with which the profession is justly viewed by interested citizens! What the regret of all honest men that the noble profession of medicine has been degraded to the level of a mercenary brotherhood!

The \$1, or \$1.50, as the case may be, does not represent the physician's salary; it represents the member's share of that salary. And if there is any improper feature in the transaction, it is the accepting a fee where no services are rendered. Very few of the members of a lodge require professional attendance, yet they pay their share without complaint; while those severe sticklers for professional dignity clamor among themselves for greater remuneration where even the services are not increased.

"Why do doctors attend lodges at such low rates?" One naturally expects to be told that they attend for the salary they receive; but we are gratuitously informed by Dr. Bibby that they (the doctors) do so "because they expect to attend the families of members of the society, and thus recoup themselves."

Does Dr. Bibby know that to be a fact in one single instance? And if so, does he lack the courage to charge the actual offender before the proper tribunal? And is it a mark of a generous and manly intelligence to shift the responsibility upon unoffending physicians for irregularities that he himself has not the manliness to prefer? Does Dr. Bibby know every lodge physician in Ontario, and the motives by which his life is actuated? If he does know them all, he knows then that his assertion is as ungenerous as it is false; if he does not, on the contrary, know them all, then his statement is a reckless generalization that does no credit to the character of a man who would presume to lecture his peers.

He asks, "Can anything be more unprofessional than such tactics and such underhand methods of obtaining patients?" to which I answer emphatically, Yes. The assumption that contract physicians engage in business through unworthy motives, the insinuation that lodge physicians are guilty of dishonorable dealing, is a thousand times meaner and more con-

temptible than any amount of paltry alleged irregularities in society practice. A lecture on professional morality from a man who delights in indiscriminate complaints without the shadow of a fact upon which to base his objections comes with a very bad grace to those men who can safely defy Dr. Bibby, or any other man, to point to any professional act that justifies the reproach of "unprofessional."

A. G. BOWERMAN, M.B.,
Court Physician, 434 C.O.F

LETTER FROM GORE BAY.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—The other day a rather interesting case of cure by nature came under my notice. The person alluded to had been working—closely confined—night and day for some considerable time, with the physical result of a run-down constitution, evidenced most painfully by intense neuralgic headaches. Nature undertook the relief of this affection at the expense of the nerve involved, viz., the right supraorbital. Evidently a neuritis ensued, with enough damage to close off the needful supply of nourishment to the nerve itself, and the tissue toned up by its activity, leading to a certain suspension of its vitality, sufficient remaining, however, to form a fibrous scar throughout the course of the nerve, which can in that way be traced, so to speak, as nicely as in a neat dissection. Commencing at its point of exit from the supraorbital notch, it passes upwards across the forehead and backwards over the scalp, leaving a line almost devoid of hair, traceable backwards. The forehead presents a streak, darkened in color, and somewhat scarified. The gentleman said that whenever his well-being was at a low ebb, this mark stood out in a darker outline, its vitality having been depressed by deficient nerve supply. This region, barometer-like, marks the condition of the system with regard to nourishment and tone. Complete relief from the neuralgic disturbance followed the primary appearance of this interesting outline.

Although this is one of the reputed results of neuritis, it is the first time I have had the opportunity of observing it, and so well-marked was it that I thought it might not be without interest to call to your attention, that one might judge the more readily of its frequency of occurrence.

Gore Bay, July 7th, 1894.

J.W.M.

Book Reviews.

A TEXT-BOOK OF THE DISEASES OF WOMEN. By Henry J. Garrigues, A.M., M.D., Professor of Obstetrics in the New York Post-Graduate Medical School and Hospital ; Gynecologist to St. Mark's Hospital in New York City ; Gynecologist to the German Dispensary in the City of New York ; Consulting Obstetric Surgeon to the New York Maternity Hospital. Containing three hundred and ten engravings and colored plates. Philadelphia : W. B. Saunders, 925 Walnut Street. 1894.

Whether gynecology has advanced as much in modern times as some contend we will not undertake to say, but certainly we can affirm that it has expanded very considerably—some think, too much. Lots of books have been written on diseases of women during recent years, some very good, some very bad ; some too large for the ordinary student and practitioner ; some too small for anybody. This book is intended for senior students, and also for those in actual practice. The author tells us that his aim was to write a practical book without devoting much space to theoretical discussions, and to treat pathology very briefly. He gives minute details as to diagnosis and treatment. He does not pretend to describe all the methods of treating the various diseases, but he endeavors, and, we think, with success, to describe very clearly those modes which he considers the best. He writes separate chapters on hemorrhage, leucorrhea, and sterility, and, in so doing, he is dealing with symptoms rather than diseases ; and, although it may be the most scientific plan, he thinks that, all things considered, it is the most practical and useful.

PAIN, in its Neuro-pathological, Diagnostic, Medico-legal, and Neuro-therapeutic relations. By J. L. Corning, A.M., M.D. 330 pages. Illustrated. Philadelphia : J. B. Lippincott Co. Price, \$1.75.

In the first part of the work the author, somewhat generally, describes the various diseases in which pain is a prominent symptom, with regard to their physiological, pathological, and clinical aspects. He dwells upon the great diagnostic value of pain, and thinks more attention should be paid to it.

The greater portion of the book is taken up with special therapeutics. Rest is laid down as a first principle in the treatment ; it should be as complete as possible, in a quiet and darkened room. A full list of old and new remedies is given, each drug being separately discussed as to its therapeutic action. The author advocates local medication to the spine, by passing a gauged trocar nearly to the spinal canal, and injecting the drug with a hypo-

dermic syringe through the trocar. Strychnine, cocaine, and other drugs have been used with splendid results, especially in spinal irritation and functional disorders.

To increase the efficacy of his remedies, he has constructed an air-tight chamber, in which the atmospheric pressure can be raised. The increased pressure on the surface of the body drives the blood internally, and so the drug which has been absorbed by the blood comes into better contact with the brain and spinal cord. To aid this action, he cuts off the blood in the extremities with a tourniquet, and so the blood circulating through the nervous system has a greater amount of the drug in solution. These latter methods apply almost entirely to functional disorders of the nervous system.

Taken altogether, the work is of considerable interest, and would be a valuable addition to any library. The typography and presswork are both in the Messrs. Lippincott's usually good style.

AN INTERNATIONAL SYSTEM OF ELECTRO-THERAPEUTICS: For Students, General Practitioners, and Specialists. By Horatio R. Bigelow, M.D., and thirty-eight associate editors. Thoroughly illustrated. In one large royal octavo volume, 1160 pages, extra cloth, \$6.00 net; sheep, \$7.00 net; half Russia, \$7.50 net. Philadelphia: The F. A. Davis Co., publishers, 1914 and 1916 Cherry street.

The subject of electricity is at present occupying a considerable amount of professional attention. There is no great dearth of literature on the subject, but it is very scattered, and, in most instances, of a very elementary nature. The above work covers the whole subject in all its various applications, both medical and surgical. It is almost impossible at the present day for any one man to write a book embracing all the branches of a particular subject, yet an able editor may surround himself with such eminent collaborateurs that his work can be looked upon as an authority. This Dr. Bigelow has done.

The introductory chapter by Dr. Herdman, of Ann Arbor, contains advice that holds good in all branches of our profession, but especially so in the electrical studies. He pleads well for a thorough laboratory and clinical training of the students in the construction of batteries and of the therapeutical uses of electricity. Until the subject is recognized and taught, its practice will undoubtedly be empirical. The succeeding 380 pages are devoted to electrophysics, animal electricity, static electricity, magnetism, faradic current, and galvanism, all dealt with by different authors. Then comes chapter after chapter on the special uses of electricity on the different organs of the body, on the functions of the organs, and concerning the action of the current in electrolysis, etc., etc.

The work is thorough and complete. It should be on the shelves of all who use electricity for reference, and those who contemplate its use should also possess themselves of it for a similar purpose. It is of great advantage to the busy practitioner to have all the literature on any one subject at hand, and by these systems he is thus enabled to do so. The typography and binding are splendid, as all the books turned out by the F. A. Davis Company always are.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. Edited by Charles E. Sajous, and seventy associate editors. Volume III. The following subjects are treated in this volume: General Therapeutics; Experimental Therapeutics; Electro-Therapeutics; Gynecological Therapeutics; Climatology; Balneology and Hydropathy; Hygiene and Epidemiology; Anomalies and Monstrosities; Anatomy and Physiology. Philadelphia: The F. A. Davis Co.

Contains articles on the surgery of the brain, spinal cord, nerves, thorax, abdomen, diseases of the rectum, anus, genito-urinary apparatus in the male, syphilis, orthopedics, amputations, excisions, fractures and dislocations, diseases of the arteries and veins, oral and facial surgery, surgical mycoses and diseases, surgical dressings, antiseptics and anesthetics.

Each section of this volume has been well written by its respective editor, and the whole is illustrated by a great many cuts, demonstrating the cases given.

Hernia occupies a prominent position in the section on abdominal surgery. The consensus of opinion seems to be to lessen the amount of taxis used, and to resort to operation more often. In gangrenous cases the formation of an artificial anus, or, better still, resection of the bowel, when practicable, has been found to give the best results. Bennett and many others advocate the radical cure of hernia, especially where trusses are inconvenient or useless, or where the patient's occupation is such as is inconsistent with a hernia.

Kelsey, of New York, discusses at some length the treatment of cancer of the rectum, advocating colotomy in preference to excision. From tables given the former certainly seems to give the patient more ease, and, although not curative, tends to lengthening of life, being a much less dangerous procedure.

Buch recommends Winternitz's method of relieving pain in an injured part, after the dressings or a plaster splint have been applied, by the application of cold. Ice bags, etc., are placed over and around the part without removing any necessary dressings. He has found it work very well, and by lessening the inflammation present has been able to keep on bandages, which otherwise would have had to be removed.

SYPHILIS IN THE INNOCENT (*Syphilis Insontium*), clinically and historically considered, with a plan for the legal control of the disease. By L. Duncan Bulkley, A.M., M.D., physician to the New York Skin and Cancer Hospital; consulting physician to the New York Hospital; lately Professor of Dermatology, New York Post-Graduate Medical School and Hospital, etc. The essay to which the College of Physicians of Philadelphia, in 1891, awarded the Alvarenga prize for the best memoir on any medical subject. 416 pages, eight volumes. Price, \$3.50. New York: Bailey & Fairchild.

This very elaborate compilation of statistics is difficult to review. It contains so much information on the subject of innocent infection of syphilis that one cannot appreciate the difficult and colossal undertaking of the author. The subject is treated of as venereal and non-venereal disease. Every phase of extra-genital chancre is considered, and hundreds of histories are given in full.

We clip the following from the introduction:

"This essay, the result of ten years' work, is presented as a contribution to the study of syphilis.

"Syphilis is not essentially a venereal disease. It has been too frequently regarded as being only such, and consequently some of its important features have been overlooked. Many able writers described well its clinical history, pathology, and treatment, as also its connection with prostitution; but the element of its non-venereal character, in many instances, has been relatively little considered, and no full presentation of the subject has ever been made. In the present essay the attempt is made to consider only this single aspect of the malady, namely, its innocent occurrence and the modes of infection whereby it is innocently acquired by means wholly unconnected with the venereal act.

"In the preparation of the work, writings in a dozen languages have been consulted directly, in addition to certain quotations or translations which may have occurred in print from other sources.

"Clinical records, more or less complete, are given of one hundred and sixteen original personal cases of extra-genital chancres, a greater number than has ever before been reported by any observer in the United States.

"A table has been prepared exhibiting the location of over 9,000 extra-genital chancres, which have been collected from the items given in the Analytical Bibliography.

"Another table, as complete as possible, gives the epidemics of syphilis which have occurred from the year 1577 to the present time; this contains data relating to over one hundred epidemics, great and small, affecting over three thousand victims, in addition to the many instances where no definite statistics were given.

"The Analytical Bibliography covers about 150 pages, and refers to cases reported by 1,500 writers. A 'Synopsis of Facts and Literature' has been added in which these are all analyzed."

The subject of innocent infection is a very pregnant one, and is liable to crop up in the practice of any physician. By having so complete a work as this in one's library, he could at any time be prepared to meet the difficulties of a diagnosis. We heartily recommend it, and congratulate the author on securing such competent publishers, who have turned out a really beautiful book.

At the annual meeting of the Association of Railway Surgeons held in Galveston in May, it was decided to have an official organ, and *The Railway Surgeon* has just reached our table. It will be devoted to advancing the science of railway surgery, and we wish it success.

The following books have been received :—

DISEASES OF THE SKIN. An Outline of the Principles and Practice of Dermatology. By Malcolm Morris, Surgeon to the Skin Department, St. Mark's Hospital, London, etc., etc. Eight chromo-lithographs and 17 woodcuts; 556 pages. Philadelphia: Lea Brothers & Co.

SAUNDERS' QUESTION COMPENDS. No. 14. Essentials of Diseases of Eye, Nose, and Throat. By Edward Jackson, A.M., M.D., and E. B. Gleason, S.B., M.D. Second edition revised; 124 illustrations. Price, \$1.00. Philadelphia: W. B. Saunders.

Medical Items.

DR. J. C. BURT, of Toronto, after a trip to Europe, returned to his home July 12th.

THERE is a popular belief in England that travelling on the electrical trolley cures rheumatism.

DR. A. R. ROBINSON, of New York, is spending a holiday with his brother Dr. C. Robinson, in Brampton.

THE next International Congress of Gynecology will be held in Geneva, Switzerland, in September, 1896.

DRS. BRITTON, McPhedran, and J. L. Davison, of Toronto, left Montreal for England on Saturday, June 23rd.

HEMORRHOIDS, when prolapsed and inflamed, and operation is refused, paint daily with tincture of iodine.—Ivanoff.

DR. THEOPOLUS PARVAN has been elected an honorary member of the Obstetrical and Gynecological Society of Berlin.

DR. OLIVER WENDELL HOLMES is said to be writing an autobiography, which will not be published until after the author's death.

DR. JOHN CAVEN, Professor of Pathology in the University of Toronto, is working at bacteriology in the Laboratory of London, England.

WE have to announce, with deep regret, the death by drowning of the eldest son of Dr. Jas. H. Burns, of Toronto, at St. Catharines, June 30.

COMMENCING with the July issue, the *Archives of Pediatrics* will be edited by Dillon Brown, M.D., Adjunct Professor of Pediatrics at the New York Polyclinic.

DR. G. S. GLASSCO has resigned his position as resident physician of the City Hospital, Hamilton. We understand that Dr. K. McIlwraith has been appointed in his place.

IT is stated that Berlin is the healthiest city in the world, the death rate being 16.3 per thousand, while Alexandria is the unhealthiest city in the world, with a death rate of 52.9 per thousand.

DR. WM. L. BRIGGS, of Nashville, Tenn., died on June 14th, at the age of sixty-six. He was an ex-president of the American Medical Association, and also of the American Surgical Association.

DR. GERALD O'REILLY, formerly of Fergus, started for England on June 30th. After an extended visit to Great Britain and the continent, he will probably return to America, and commence practice in Detroit.

THE convention of the Medical Health Officers' Association of Ontario will be held at Chatham, August 14 and 15. The delegates will be given a banquet by the local committees on the evening of the second day.

It is said that the Czar of Russia is very much pleased with the decision to hold the next International Medical Congress in Russia, and has signified his intention of contributing fifty thousand roubles towards the expenses of the meeting.

THE British Medical Association will hold its sixty-second annual meeting in Bristol on Tuesday, Wednesday, Thursday, and Friday, July 31st, and August 1st, 2nd, and 3rd, under the presidency of Dr. George Hare Philipson, of Durham.

THE following graduates ('94) have been placed on the resident staff of the Toronto General Hospital: University of Toronto—W. J. McCollum, J. Crawford, D. J. Armour, and J. P. Sinclair. Trinity University—C. B. Shuttleworth, C. D. Parfitt, T. G. Devitt, and Geo. H. Field.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.—The fourth annual meeting of the American Electro-Therapeutic Association will be held in New York, September 25th, 26th, and 27th, at the New York Academy of Medicine. Members of the medical profession are cordially invited to attend.

THE New York *Medical Record*, June 16th, tells us there were three successful Cæsarean sections in New York during the preceding four weeks. The operators were, respectively, Drs. Bolt, Coe, and Dudley. All the mothers and children were saved. In two of the cases the operations were performed for the second time.

DR. S. N. DAVIS left Toronto on July 11th for the Georgian Bay District to visit Spanish River and other places in Manitoulin Island, and on the main shore, for the purpose of vaccinating those requiring the operation. He was sent by the Provincial Board of Health in accordance with a decision reached at an emergency meeting held July 11th.

DR. CASE, of Hamilton, is said to be the oldest physician living in Ontario. He graduated in medicine a little over seventy-two years ago, his age at that time being twenty-two. He is now ninety-four years of age, and is enjoying good health. He says himself he is just as strong to-day as ever he was, with the exception of a lame back. He has never tasted intoxicating liquors and has never eaten meat.

THE London *Lancet* is opposed to certain features of the income tax. It says there ought to be a great difference, for taxing purposes, between the incomes of men which are earned by hard and exhausting labor, dependent on the continuance of their health while engaged in the pursuit of an arduous and risky profession, and the incomes of men derived from investments which do not cease even with life itself.

THE regular quarterly meeting of the Huron and Bruce Medical Association was held in Seaforth, July 10. The chief event of the day was the delivery of an address on "The Treatment of Diphtheria" by Dr. George R. McDonagh, of Toronto. An interesting discussion ensued, after which Dr. McDonagh received the cordial thanks of the members present, and was elected an honorary member of the society by a unanimous vote.

SURGEONS' HANDS.—One can tell, nowadays, something of the amount of work which a surgeon does and the thoroughness with which he does it by looking at his hands. The strong bichloride and permanganate solutions with which the hands are sterilized (after the epithelium has been faithfully scrubbed off with a brush) make the hands rough and horny. The hands of some of the operators and nurses are practically incapacitated for work by this constant régime.

THE following references should have been given with Dr. A. McKinnon's paper on McGill's operation for prostatic enlargement, which was published in our last issue: *British Medical Journal*, Oct. 19, 1889, by Mr. McGill; *American Journal of the Medical Sciences*, November, 1890, by Belfield; *British Medical Journal*, 1st vol. for 1892, by Mansell Moullin, pp. 1185, 1250, 1294; *British Medical Journal*, 1st vol. for 1893, by Buckston Brown, pp. 513; *British Medical Journal*, 2nd vol. for 1893, by J. W. White, p. 575.

SIR JOSEPH LISTER.—The Council of the Society of Arts has, with the approval and sanction of the president, His Royal Highness the Prince of Wales, awarded the Albert Medal to Sir Joseph Lister "for the discovery and establishment of the antiseptic method of treating wounds and injuries, by which not only has the art of surgery been greatly promoted and human life saved in all parts of the world, but extensive industries have been created for the supply of materials for carrying the treatment into effect."

WE desire again to remind our readers that the next meeting of the Canadian Medical Association will be held in St. John, N.B., on August 22nd, 23rd, and 24th. We understand that a few of our Ontario physicians have decided to go, but we would like to hear of more. The month of August was chosen rather than that of September because it is thought it would better suit the convenience of the members. It is generally considered that there is no better time for a trip to the Maritime Provinces than the latter half of August.

DR. J. H. ROHÉ, of Katonsville, Maryland (formerly of Baltimore), attended the meeting of the Berlin Society of Obstetricians and Gynecologists, May 9th and 10th, as the official delegate from the American Association of Obstetricians and Gynecologists. He will return in time to attend the seventh annual meeting of the American Association of Obstetricians and Gynecologists, which will be held in Toronto, Wednesday, Thursday, and Friday, September 19th, 20th, and 21st. Dr. Rohé is the president of this association.

THE POPE AND AN AMATEUR PHYSICIAN.—The *Gazette de Gynécologie* for May states that a curate named Kneipp, renowned for his cures with cold water, was lately consulted by Pope Leo XIII. for certain pains attributed to

his advanced age. The curate advised the application of cold compresses to the knees and to the nape of the neck. This treatment produced most unfortunate results; the Pope took cold, and his knees became so swollen that he was obliged to call upon his ordinary physician. Monseigneur Kneipp, says our contemporary, is no longer in the odor of sanctity at the Vatican.—*New York Medical Journal*.

PATHOLOGY AS SHE IS WROTE.—The following, under the caption of "Snakes in the Blood," is a reporter's idea of *Filaria Sanguinis Hominis*: "A discourse on the disease of which King Herod died entertained the doctors who gathered at the Section on General Medicine. It was read by Dr. G. Laussure, of Charleston, S.C. In the disease described, little white snakes get into the blood and wriggle about until the patient dies. Several of these were exhibited. The doctors call the disease *Filaris Hominis Sanguinis*, and it occurs at the present time only rarely. The snakes, which are long, white substances, retire to the secluded organs of the body in the day, when the subject is moving about, but come into the veins and arteries at night when he is sleeping."—*Medical Record*.

THE EFFECTS OF MEDICAL LIFE ON THE PHYSICIAN HIMSELF.—In the great majority of cases the special influence of the medical life of the present day is to broaden the views of the man who lives it, to make him independent in judgment; rather sceptical as to the occurrence of the millennium in the near future; quite incredulous as to the truth of the maxim that "all men are born free and equal"; more inclined to consider and perform the immediate evident duty of the day and hour which lies just before him than to reflections upon the errors of other men; free from morbid fear of death, and of that which comes after death; and none the less a believer in the existence of a Supreme Being and in the fundamental principles of religion, although he may not consider them capable of scientific demonstration.—John S. Billings, in the *International Journal of Ethics*.

WHAT BECOMES OF PHYSICIANS' CASE-BOOKS?—The question has been recently asked, in terms of anxiety not unmingled with suspicion, What becomes of the case-books of a consultant after his death? It is impossible for us, of course, to say what means have been taken to secure secrecy in all such cases, but we may safely infer the general practice from particular cases. The care which is taken by all physicians in large practice to protect their notes from curious persons is seen in such precautions as the private drawer and the padlocked cover. The disposal of such records after the death of the consultant is, no doubt, carefully regarded in all cases. Sometimes the records are made over to a son, or other successor in practice, either to be used for the benefit of the patients, who may return for subsequent consultations, or for the purpose of scientific investigation, as in the instance of the notes of the late Dr. Williams. In two other cases, well known to us, the note-books were consigned to a medical friend for scientific uses, and in a third the volumes were consigned to the furnace of the plant houses by a member of the family.—*British Medical Journal*.

THE seventh annual meeting of the Medical Alumni Society of the University of Toronto was held at the Royal Canadian Yacht Club (Island) on Thursday, June 14th. The evening of annual convocation, Dr. E. E. Kitchen, of St. George, who has been one of the most active and energetic presidents of the society, occupied the chair. After the necessary business had been transacted, the election of officers took place. Dr. A. A. Macdonald was nominated for president, but withdrew, and proposed Dr. Adam Wright, who was unanimously elected. The vice-presidents chosen were Drs. A. A. Macdonald, W. H. B. Aikins, J. F. W. Ross, L. McFarlane, and E. J. Barrick. Auditors, Drs. E. E. King and J. D. Thorburn; Treasurer, Dr. B. L. Riordan; Secretary, Dr. Harley Smith; Council, Drs. Geo. W. Jackes, A. J. Johnson, John Ferguson, C. J. Hastings, Price Brown, E. E. King, T. J. McMahon, J. A. Harrington, G. R. McDonagh, and C. J. Cuthbertson. The members present then sat down to an excellent dinner, served in the comfortable dining-room of the club, overlooking Toronto Harbor. It was noticeable how few of the members of the Medical Faculty were present; but, nevertheless, every one was in the best of spirits, and the evening went all too quickly. Vice-Chancellor Mulock graced the banquet with his presence, and gave a most eloquent reply to the toast of the *alma mater*. Other toasts were responded to by the retiring president, Dr. Kitchen, and others.

THE DEATH-WOUND OF CARNOT.—The death of the President of France by a stab of the liver is an instance of rare wound occurrence. We do not at present recall a similar case of fatal termination. Rupture of the liver from contusions and perforations of the substance of the organ by bullets are not very uncommon, but deep knife-wounds inflicted by an assassin are almost unheard of. It is quite evident that the wound in the case of the lamented victim was fatal from the moment of its infliction. The cablegrams state that the substance of the organ was penetrated, as shown by the autopsy, to the depth of five inches, that the aortic (evidently the cava ascendens) vein was wounded, and that two quarts of partly clotted blood were found in the peritoneal cavity. The distinguished victim died from the shock of sudden internal hemorrhage. Almost immediately after the thrust the mortal character of the wound was clearly indicated by the quick collapse. The futility of performing laparotomy for the arrest of such a condition was demonstrated by the results in this instance. It is still a question whether or not it is advisable to explore such wounds while the patient is in a condition of profound shock. If the hemorrhage from a wounded liver is of sufficient magnitude to induce rapid collapse, it seems quite clear that exploring the wound in the vain hope of securing a large vessel only adds to the gravity of the situation by intensifying the shock and proportionally reducing the ultimate chances of the patient. If, on the other hand, the bleeding is small enough to be controlled by tamponing the liver substance, it will do no special harm if left to itself. It is quite probable, however, that the bleeding was very rapid, that syncope occurred very quickly, and that the hemorrhage had ceased of itself long before death. At the worst, it was a mercy that it was so soon over.—*Medical Record*.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The American Public Health Association will hold its twenty-second meeting in Montreal from the 25th to 28th September next. The association was organized in 1872 for the purpose of inaugurating measures for the restriction and prevention of contagious and infectious diseases, and for the diffusion of sanitary knowledge among the people. The growth of the association and the work it has accomplished more than justify its existence. Its membership has been augmented from year to year, until it now constitutes the largest and strongest sanitary body in the world, and embraces in territorial extent the United States, the Dominion of Canada, and the Republic of Mexico. Under the impetus given by its work, state and local boards of health and sanitary associations have been organized, sanitary publications increased, and hygienic knowledge widely and extensively diffused.

Among its members may be found physicians, lawyers, ministers, civil and sanitary engineers, health officers, teachers, plumbers, merchants, etc.; in fact, every profession and many of the industries are represented in its list of members. The only qualifications required for membership are a good moral character, an interest in hygiene, and the endorsement of two members of the association. The membership fee is five dollars, which hardly covers the cost of the copy of the proceedings of the convention to which every member is entitled.

The local Committee of Arrangements is at work to insure a large and profitable meeting, and it is to be hoped that the number of Canadians who will join the association for this Canadian meeting will compare favorably with what has been done elsewhere.

The railways have reduced their rates to one fare and one-third, provided certificates of attendance be produced when leaving Montreal on the return trip. Special blanks for this purpose will be furnished on demand.

An excursion to Grosse Isle Quarantine Station (over 200 miles from Montreal) has been arranged by the local committee, leaving by boat on the afternoon of the 28th, to return early on the 30th, and will be most attractive both from a sanitary and scenic point of view, the quarantine station being well equipped and the route to Grosse Isle being through the most interesting part of the Province of Quebec.

For application blanks or further information, address Dr. Irving Watson, Concord, N.H., or Dr. E. Pelletier, Montreal.

The officers of the association are as follows: President, Dr. E. P. La-chapelle, Montreal; first vice-president, Dr. M. Carmonay Valle, Mexico, Mex.; second vice-president, Dr. J. M. McCormack, Bowling Green, Ky.; secretary, Dr. Irving A. Watson, Concord, N.H.; treasurer, Dr. Henry D. Holton, Brattleboro, Vt. Officers of Local Committee of Arrangements—Chairman, Dr. Robert Craik, Montreal; secretary, Dr. E. Pelletier (office, 76 St. Gabriel Street, Montreal). Representative of Ontario on the Local Committee of Membership—Dr. P. H. Bryce, secretary Provincial Board of Health, Toronto.

CREDIT TO WHOM CREDIT IS DUE.—At the nineteenth annual meeting of the United States Hay Fever Association, Dr. S. S. Bishop, of Chicago, obtained the prize for the best essay on the subject of hay fever, proposing the theory of uric-acid origin, with salicylate of soda for treatment. One year previous to the reading of the essay, Dr. Shawe Tyrrell of Toronto, read a paper before the Ontario Medical Society, entitled "A Predisposing Cause of Hay Fever," which was afterward published in the Canadian journals, setting forth the uric-acid origin of the affection, and its treatment by soda salicylate and a proper diet.—*N. Y. Medical Record*.

TO DO JUSTICE.—Dr. Seth Scott Bishop, M.D., of Chicago, writes : "Will you kindly do me the justice to publish my reply to your paragraph concerning me on page 597 of the *Record* for May 12th ?

"My prize essay on hay fever for 1893 was written without any knowledge of Dr. Tyrrell's work. If I had known that he had written on the subject I should have gladly availed myself of any valuable facts brought to light, and should have given him full credit, as I did with the thirty-eight other authors quoted. Indeed, I stated that 'I had taken pains to give each investigator ample credit by liberal quotations.' After writing the essay I learned that Leflaive had preceded me in this line of study by at least four years, and gave him due credit, so that, happily, there is no occasion for any dispute between us concerning priority. We are both antedated. We have arrived at the same results through independent investigations, as often happens, and I do not want, and have not received, any credit to which I am not fairly entitled."—*N. Y. Medical Record*.

OBITUARY.

DR. WILLIAM AUGUSTUS BALDWIN.—Dr. Baldwin died at his home in Deer Park, Toronto, July 13, at the age of 53. He took his course in the Toronto School of Medicine, and received his certificate from that institution in 1868. He practised in Winnipeg for some years, but came to Toronto about three years ago.

DR. ROBERT H. HUNT, of Clarksburg, died at his home, July 4, from apoplexy. He had been in poor health for some time, and spent most of the last winter in California on account of incipient phthisis. He took his medical course in the Toronto School of Medicine, and graduated in the University of Toronto in 1868. He practised in Clarksburg for twenty-five years, and was very highly respected by all classes in that vicinity.

DR. GEORGE E. FENWICK was for many years known as one of the ablest surgeons of Montreal, and also one of the best teachers in McGill Medical College. His death, last month, caused deep regret among his many friends in all parts of Canada, who respected him for his great abilities, and loved him for his kindness of heart and rare social virtues. He was born in Quebec in 1825, and passed his final examination in McGill in 1845. He was appointed demonstrator of anatomy in McGill in 1860, professor of clinical surgery in 1867, and professor of surgery in 1876.

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[No. 8

Original Communications.

HEADACHE.*

BY DANIEL CLARK, M.D.,

Medical Superintendent of the Hospital for the Insane, Toronto ; Extra-Mural Professor of
Mental Diseases, University of Toronto.

THERE is no symptom which is thrust more prominently upon the notice of the physician than headache. It is safe to say that nine out of every ten patients we meet with complain of headache to a greater or less degree. If we eliminate local causes for headache we will find that it is a symptom of a large class of bodily diseases, some of which may be in distant parts of the body. If the headache should be a prominent symptom we are inclined to treat it alone because of its persistency, and to overlook the primal cause of this painful signal of distress. In short, we are always to keep in mind the various reflexes which, in their multifarious forms, cause abnormal function and suffering beyond the central pathological area. For example, we have an intermittent pulse in various

*Read by title before the Ontario Medical Association, June 7th, 1894.

forms of atonic dyspepsia, when there is no organic heart disease. We have some forms of puerperal mania through the influence of the sympathetic system. The brain is ripe for pathological change, and the shock from the uterus and its appendages is the necessary excitant to evoke the heretofore latent diseased condition in distant parts. We have various forms of kidney and glandular disease, which we now know to have their origin in the trophic centres. In short, within the last twenty-five years much knowledge has been gained in respect to nerve influence on cell life, on vascular activity, and on selective affinity, which has revolutionized our diagnosis and treatment of disease. It is not my intention to inflict upon you an essay on headache in general, but rather to show the importance of a thorough examination into the cause of its existence in every individual case before treatment. Of course, we are to eliminate from our list such headaches as are present in fevers, inflammations, and those of traumatic origin. In such we know that the headaches will disappear when the obvious causes are removed. The same might be said of the hemicranial, occipital, and nocturnal headaches so pathognomonic of syphilis, especially in the secondary form.

In this connection it is well in practice at the outset to minutely enquire into the life history of those afflicted with persistent headache. Heredity and constitutional taint are potent factors, not to be overlooked. The form of the heredity is important in order to know what may be the likely inheritance. Neuropathic weakness may manifest itself in children in different forms from that found in the parents. Instability of the nerve centres can and does manifest itself in protean forms, as the heritage to descendants. Insanity, epilepsy, hysteria, dipsomania, neurasthenia, syphilitic degeneracy, and such like, may, in a vicarious way, take the place of one another. A knowledge of the existence of such bequeathment will help our diagnosis and prognosis very much. Our first enquiry should be along these lines.

It will be next in order to ascertain the existence of personal conditions and the presence, if any, of such diseases as heart trouble, dyspepsia, rheumatism, syphilis, and any of the strumous classes of diseases. It is of paramount importance to ascertain, if possible, under what causes and conditions the first attack came on. It might be after brain and eye were unusually taxed. A sunstroke, a fall, a blow, or a powerful emotion might be a precursor of the first attack. Much can be learned of present conditions from knowing the causation, and this knowledge leads to more intelligent treatment.

On the other hand, it is often forgotten that a large number of brain diseases exist without pain. The diseases are known more by a change in correlative energy, and in impaired functional activity. There may be no

apparent change in gross brain structure, although such change may be great in the ultimate elements, but, so far, beyond human ken. Simple blood deterioration may exist by the absorption of toxic agents, or by the absence of normal constituents. Numberless are the ways of a malign nature which disturb the sensorium, yet without physical suffering. Post mortems often reveal exostoses of all sizes growing from the calvarium, tumors, encapsuled abscesses, and the death of extensive areas of brain substance, as the result of embolism, without headache or even any apparent functional disorder commensurate with the injury found. It is astonishing how much destructive lesion and constructive abnormalities can exist within the skull without mental or physical disabilities. Very few of the insane complain of headache, and often, when such complaint is made, all the conditions of health are present. Good sleep, unimpaired appetite, and no constitutional disturbance show how often such statements are delusional, or made to deceive. Usually the hysterical, who border on the above class, have periodical headaches. It is generally located in the top of the head, and along the line of the occipito-frontalis muscle. Sometimes it is found in the neighborhood of some of the terminal branches of the fifth nerve. Worry of any kind, or menstrual disorder, intensifies it. The patient describes it as if a nail were penetrating the head. The neurasthenic headache is usually of a dull and undefined character, with, occasionally, tenderness in the back part of the head.

In the treatment of any of the head neuralgias or headaches, two objects are kept in mind: First, to relieve the immediate and persistent local pain; second, to cure, if possible, the disease by using remedies which tend to bring about a better condition of the system.

To alleviate local pain we have at our command a number of sedatives and anodynes, such as aconite, menthol, belladonna, and chloroform for external applications, and a legion of remedies such as quinine, iron, arsenic, opium and its salts, chloral, hyoscyamine, antipyrine, the bromides, and all the much-lauded remedies which have recently sprung into existence through synthetical chemistry. The remedies are so many that they can be counted by the hundreds, and this poly-pharmacy has been endorsed by many respectable physicians, who lend their names and influence to druggists to induce their less credulous brethren to invest in these so-called panaceas. When countless medicines are prescribed for any one disease we may be sure no specific has been found for it, and that our administration of drugs must be largely empirical, or simply based upon experience.

It is true that the causes which operate to produce the neuralgias and headaches are often obscure, and too often have to be dealt with on general principles. We reason from analogy in our practice, and aim to

give pabulum to the master-builder of our cellular structure, who gallantly fights to regain lost ground and to assume normal conditions. It is possible that our success in ameliorating, if not curing, the various headaches by the administration of cod liver oil, or by any of the hydro-carbonates, is a good illustration of this doctrine. As a rule, those afflicted with any of the neuralgias are anæmic, and even those who store up a good deal of adipose tissue are sometimes also afflicted, and are usually of a nervo-sanguine type, with evident instability in the great nerve centres. These states are liable to induce nerve pain in those of a neurotic diathesis, on whom even atmospheric changes in temperature and density have malign influences.

We also know that fat, in one or other of its forms, is not only a fuel, but is also a protector of the delicate nerves of fine organization. We see this in the structure of nerve fibre. A fatty organization is the sheath or axis cylinder of the delicate nerve fibre. This "white substance of Schwann" is the insulating covering of the nerve proper, and is necessary for the thermal protection of nerves outside the bony cavities.

We know that in the most of the neurasthenic, anæmic, and neuralgic we find a deficiency of fat in the system; so this nerve envelope must partake of the general deficiency. This is the reason why the exposed parts of the body, such as the head, face, and neck, are so susceptible to changes of temperature, and why the wintry weather is the time in which the affliction mostly prevails. This statement refers to those nerve pains which are brought about by general conditions, and not by any local irritations. As a rule, such are found to be associated with malassimilation and malnutrition, at the foundation of which lie hereditary tendency or dyspepsia of the atonic kind, worry beyond measure, mental strain from overwork, and such like drains upon the physical system, especially upon the trophic centres. I know of no other theory why cod liver oil has been so beneficial in the various neuralgias, especially where we find anæmia and neurasthenia.

It may not be out of place here to sound a note of warning as to the use of anodynes or narcotics in headache. It must be remembered that to benumb by drugs is not to cure. It is possible that their use retards recovery for the time by temporarily paralyzing vital energy and feeling; hence the necessity to be sparing in their use. Not only so, but a large number of our narco-maniacs come from this class, and it is to be feared that a good many medical attendants are unwittingly to blame by taking such patients into their confidence and informing them what quieting drug is being administered. As a result, the patients go to the druggist for their solatium after medical attendance has been dispensed with. An alliance, offensive and defensive, is set up between patients and druggists.

and from that day the life history of many such individuals is downward to insanity, or to a premature grave. No medical man should administer any such seductive drug except in a masked form, and, above all, should possess a discreet tongue as to the remedies used. Operate on the patient through faith, as well as by works. My experience of dozens of such cases has been sad, and nearly every one of them came to the knowledge and use of such drugs through the well-meant but ill-advised disclosures of the doctor. I give this note of warning in passing.

We know how prevalent is what was formerly called "bilious or congestive headache." The severe frontal pain, as if a band of iron were grasping the brow; the distressing nausea, and often vomiting; the appearance of waviness in the atmosphere, from affected vision; the *muscæ volitantes*; the dry skin in some and the profuse perspiration in others are ever present. It is most frequent in those of a nervo-bilious temperament. It comes at irregular times, and with little warning, especially to the Epicurean who overtaxes the digestive processes.

The many are often relieved immediately by drinking a strong cup of tea or coffee, or by a dose or two of bromo-caffeine or cocaine. In others it will run its course in spite of all remedies in twenty-four hours, and is followed by drowsiness and sleep. At the climacteric of life in man or woman this form of headache usually leaves, never to return. That is one of the advantages of advancing years.

There is another form which is often seen among the anæmic and dyspeptic. It involves the whole head, but is more intense at both temples. I have noticed that chlorotic females are often subject to it at menstrual periods. The barometric condition affects it very much, and I have observed a number of cases that were almost sure to be attacked when the barometer ran low and the wind was in the east, as the harbinger of an east storm. In such cases little can be done beyond general building up. So distressing is such a condition that I have given for temporary relief sulphonal, phenacetine, or chloralamide, especially the latter. They act as excellent anodynes, and produce less depressing results than do opium or its salts, hydrate-chloral, hyoscyamine, Indian hemp, belladonna, and such like. At best they are only palliative, but are resorted to in order to comfortably tide over an attack.

My object, however, is not, as I have said, to give an essay on headache, but rather to point out the necessity of strict enquiry and examination into the primary and proximate causes which operate in each case. Any treatment based on mere superficial knowledge and on the simple fact of headache merely would be empirical and unsatisfactory. It is necessary to emphasize the fact stated, that any medicine which merely allays pain by lowering the vital power of sensation cannot be curative, but

only palliative, and if continued for any length of time is harmful and never restorative, in a primary sense. Our main aim should be to tone up the system, and not to paralyze it, locally or generally.

I might append hundreds of formulæ which are recommended and classified according to the various kinds of neuralgias and headaches, but forbear, as you know how many of them disappoint us in practice. At the same time, it is well to keep in our minds the various conditions in each class, such as the neurasthenic, neuralgic, organic, toxic, anæmic, or congestive, when we apply our therapeutic knowledge.

My experience has gradually reduced the various radical remedies to few, and these are such as cod liver oil, the phosphides, nux vomica, quinine, arsenic, phosphoric acid, and the milder forms of the bromides and iron in its citrate or albuminate form.

I have not touched upon the use of electricity, in one or other of its forms, for the cure or amelioration of the various headaches. Learned treatises have been written in laudation of its benefits. The special kinds of currents and the direction of each are indicated, as well as the points of contact, especially along the course of the fifth or seventh pairs of nerves and their ramifications. There is no doubt that in hysterical cases the formidable apparatus and its scientific name, with the local sensation, have a beneficial influence on such neurotic persons as a sort of mental therapeutics, just as a thermometer under the tongue is said to have had in an historic case. There is a great deal in a name, as we all know how eagerly such nostrums as electric oil and magnetic ointment were sought for, as they were supposed to contain electricity bottled up. So batteries as cure-alls have become one of the drawing cards in modern charlatanism. The fact is, that animal magnetism and electrical action, either in faradization or in static electricity, are factors of activity whose influence upon the molecular life of nerve structure is unknown from a therapeutic standpoint; hence the uncertainty of its effect upon local pain. Electrotherapy may yet be applied with benefit when advanced knowledge of its operations can enable us to use it with discretion. So far its use is empirical, and its effects upon pathological conditions, such as are found to exist in the ganglionic nerve centres, are as apt to injure as to cure.

The records of its advocates show this; hence a word of caution as to its use in headaches, whose exciting causes may not be in the periphery, but in distant and central parts.

It is never to be forgotten that a large number of those afflicted with headache are afflicted with constipation as well as indigestion. The alimentary tract lacks tone and discharges its duty sluggishly, especially the colon, in its ascending and transverse sections. The urine shows often a decrease of urea, and also, as functional results, we find in it sugar, albu-

min, and uric acid crystals. The existence of these indicate the line of treatment.

Frontal headache is often associated with gastric disturbance, but also from the same cause we may have vertical and occipital pain. Chlorotic and anæmic females usually complain of frontal headache and great pain behind the orbits, which is often very intense. Such headache, however, is usually intermittent, and is often accompanied with general lassitude and physical impoverishment. It is striking to notice how intimate headache is with so many distant bodily diseases. Local pains from far removed causes do not exist to the same extent in any other part of the body. This relation between the head and all the body is striking, and, so far, insoluble, except on the reflex theory.

These reflexes are strikingly seen in the disturbance occasioned by migraine and the various other headaches upon the thoracic organs and stomach, as is evident in the pulse, breathing, and vomiting. This can be easily understood when we consider the intimate relation which exists between the pneumogastric and the chief central nerves, especially the glosso-pharyngeal, the fifth, ninth, the seventh and third pairs. The close alliance of the *par vagum* with the sympathetic, especially the cardiac and solar plexuses, shows that there is a community of sympathy which may and does spread over large and distant areas; hence the importance of localizing causes, and of not being deceived into believing that the pathological condition must be where the pain exists.

In inflammatory diseases, in kidney disease, in febrile conditions, in specific contamination, in morbid blood changes, in anæmia and plethora, we have head-pain of divers kinds, localized or general. This distressing symptom is almost a pathological index finger to indicate change in bodily conditions. It is also noticeable that pain which follows definite nerve tracks is neuralgic and usually intermittent. Pain limited to certain areas is also, for the most part, functional. All such are paroxysmal; but if pain is constant in the head, although remittent, and no extra-cephalic cause apparent, then does it point to serious lesion in the interstitial substances or arteries of the brain. This diagnosis is almost a certainty if optic neuritis and vomiting are present. Absence of it is not absolute evidence of intracranial soundness; but if serious pathological changes are evident in other directions, then this negative fact is valueless.

I have stated that the insane have little headache, although the contrary might be expected. Two principal reasons for this might be given: (1) The brain proper in its structure outside of its blood vessels and envelopes is painless. (2) The insane have not the sensitiveness of the sane because of lower vitality. This is seen in the performance of surgical operations on them, and in the capacity they have to endure self-mutila-

tion. If permitted to do so, many such would wound themselves, and would apparently be oblivious of any pain.

Within the last few years much attention has been given to the relation between eye-strain and headache. The increase of book learning among children, of clerical work of all kinds, of mechanical labor needing good sight and close attention, and of indoor employment in badly lighted rooms, or in badly arranged light, lead to errors of refraction or to muscular inco-ordination, and, as a result, eye-strain and frontal or orbital ache. In a majority of such cases there is astigmatism. This irregularity of the refractive media of the eye must of necessity mean stress in the operations of the eyes, and also produces nerve instability and pain. The mere eye rest taken in a number of such cases is followed by want of the usual headache, showing that herein is cause and effect. In such cases medicine alone, without rest, has proved of little value. In large cities and towns where the conditions favorable to this kind of headache mostly exist, it is evident that those facts have been largely overlooked until a comparatively recent period. This form of headache is a good illustration of a sympathetic or reflex kind. Reflexes are far-reaching in their effects, and the study of them is of paramount importance if success in treatment is desired. This fact I wish to emphasize.

In conclusion, my aim has been in this monograph :

(1) To direct attention to the importance of studying the reflexes in our diagnosis.

(2) In trusting more to general hygienic measures to promote health than to local or general medication.

(3) To study *ab extra* causes which are more general and potent than we may suppose. We are often deceived because of the local distress appearing so prominent.

(4) Not to delude ourselves into the idea that a benumbing treatment is curative, but, on the contrary, it often handicaps the heroic efforts of nature to again reach healthy conditions.

(5) To check the growth of the ever-increasing army of narco-maniacs by professional reticence in the use of seductive drugs. Headache and its many anodynes are fruitful sources through which this baneful habit is acquired.

(6) The classifications and remedies are legion, but the treatment must be applied to *genera* rather than to the *species*, as common causes lying in deranged cell life do produce multifarious manifestations.

FRACTURE-DISLOCATIONS OF THE SPINAL VERTEBRÆ.*

BY A. BEVERLEY WELFORD, M.D.,

WOODSTOCK, ONT.

IN selecting this subject it has not been my intention to go elaborately into the subject of injuries to the spine in general, but more particularly to refer to that class of severe injuries resulting in fracture or dislocation, or both, and where the spinal cord has been injured, producing more or less complete paralysis of the parts below the injury ; and, if possible, by discussion from the members of this association, to throw more light upon the subject, and to endeavor to establish a clearer line of surgical treatment in such severe and apparently hopeless cases than there seems to be at the present time. It does appear to me that some useful lives could yet be saved that are gradually frittered away, relying almost entirely upon nature to remove the trouble.

I refer, of course, to surgical interference. If a person receives an injury to the head, and there is depression of the inner plate producing unconsciousness and paralysis, we would not hesitate to trephine, and eventually save our patient. Why should not the same principle guide us in fracture-dislocations of the spine ?

Why should we wait from five weeks to three months or more for nature to do what surgery could do better ?

Valuable time may be lost and extensive damage done to the cord by degenerative changes that are so apt to follow such severe injuries. Too long pressure of simply smooth bone may produce persistent paralysis. Sharp spiculæ of bone may so injure the cord that its constant presence may produce abscess or softening of the spinal matter, or pent-up effusion of blood or serum may complete the compression which has not been entirely effected by the misplaced or fractured bone.

Surgery, in all probability, could relieve these dangers, and the inflammatory action which is so apt to follow such severe injuries.

Surely the dangers consequent upon the operation itself, in these days of clean finger-nails, night-robes, and sterilized waters, should not be put

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into the balance against the good results which may follow. Certainly, it would not cut much of a figure as against the prospects of from two to twenty-five years of a paralyzed, miserable, and useless existence.

I do not intend going into the symptoms of the various degrees of spinal injury, but only to refer to the surgical part of those cases where paralysis exists. A person receiving a severe injury to the spine, and paralysis being present, what shall be our line of treatment? Where continuous paralysis exists, it is positively certain that the cord has either been lacerated or pressed upon by bone, fluid effusion, or a foreign body. If the paralysis comes on immediately after the injury, it is tolerably certain that it is due either to bony compression or laceration of the cord, or both. I know of no symptom or sign that would enable us to say with certainty which it may be.

After careful extension and counter-extension has been resorted to with no appreciable benefits following, why should we not be justified in cutting down and relieving the possible dangers of compression?

Exploratory incisions in abdominal operations are to-day countenanced, and give us the satisfaction of a closer inspection and a definite conclusion as to the nature of any obscure tumor. So would it be in compression and laceration of the cord. The operation could relieve any compression by removal of the posterior arches, and if laceration were present we would not be in any worse condition than before with a great deal of doubt as to the prognosis removed.

I am so convinced that this procedure would be a move in the right direction, from facts gained in two operations I have had the privilege to perform during the last four months, that a recital of them will be of interest in this connection :

On the 26th of January, 1894, Mr. John Lounsbury, æt. 50, of Burford township, was thrown down a steep embankment, alighting on the back part of his head, with the weight of his body thrown upon the cervical spine. He was picked up unconscious, and removed to his home a short distance away. When he had recovered from the stunning it was discovered that he was paralyzed from his arms downwards, and his head was thrown unnaturally forward. He complained of severe pain on motion over the seventh cervical vertebra. During the following three days the paralysis gradually extended to the arms, and the respiration was very much more embarrassed. On January 31st I first saw him. His face and eyes were very much congested, and blood was coming from his nose. The latter was no doubt due to defective respiration, which appeared to be almost entirely diaphragmatic; pulse, very weak, and 155; and temperature 104° F., evidently within a few hours of death. At the earnest solicitation of his family, and with the concurrence of Drs. Johnston,

Staples, and Taylor, the cervical vertebræ were exposed from the third to the seventh, and it was found that the vertebræ above the sixth were dislocated forwards, with a fracture of the right side of the arch or lamina of the fifth, a small spicula of which projected into the canal and against the cord, but there was no evidence that the cord had been punctured by it. The two superior articular facets of the sixth were easily seen, and the inferior facets of the fifth were advanced, and hitched in front of the superior ones. It was not possible to reduce the dislocation by extension and rotation of the head until an aneurism or pedicle needle (the only instrument that would suit the purpose I had with me) was slipped in front of the arch of the fifth, and upward and backward traction made with extension and rotation of the head, when it came to its natural position with a snap, but on a slight movement of the head forwards it became redislocated. The posterior common ligament, the ligament sub-flava, and capsular ligament being torn, the sheath of the cord was exposed, very much inflamed, with a quantity of bloody fluid about it. There was no object in removing the arches, as the reduction was easily accomplished. A silver wire could have been twisted around the spinous process of the fifth, and drawn tightly around the spinous process of the sixth, holding the bones admirably and firmly in position, had not the spinous process of the sixth been cut off. The wound was washed out with a bichloride solution, a drainage tube inserted, and the wound closed by a double tier of sutures. He was bound to a padded fence board like an Egyptian mummy and put into bed. His breathing was very much improved, the congestion of the face disappeared, and he was able to direct the disposition of his affairs, and expressed himself as much relieved from pain. He lived about nine hours after the operation without having gained any muscular power in the arms or legs. His respiration was improved, no doubt from the relief of pressure to the nerve strand which emerges at the opening between the fourth and fifth vertebræ which goes to form the external respiratory nerve, and supplies the serratus magnus. The increased action of this muscle upon the ribs was the only perceptible effort of renewed muscular action. No improvement in sensation.

Query: Would it have been better to have operated sooner?

CASE 2 was one where an engine driver named William Turney, æt. 36, was running out of Rochester about two years ago, and, during a stop, was cleaning his engine, when a train shunted in behind, knocking him on to the roadbed, the engine doubling him up beneath the cow-catcher, producing a fracture-dislocation between the eleventh and twelfth dorsal vertebræ. He became immediately paralyzed from that point down, was taken to the Rochester city hospital, where extension and counter-extension were applied. He went through the usual symptoms in such cases of

irritable bladder, insomnia, huge bedsores, etc., without the slightest relief to the paralytic symptoms, the bones becoming consolidated.

He being particularly solicitous for an operation, laminectomy was done on May 25th last, with the assistance of Dr. McKay, M.P.P., Ingersoll, and Drs. McLurg and Rice, of Woodstock. An incision six inches long, over the spinous processes, was made, and the muscles and tendons cleared from the spinous processes and laminae. The posterior arches of the eleventh and twelfth vertebrae were removed just internal to the transverse processes, thoroughly exposing the cord for about four inches. The sheath of the cord was so adherent to the arches, owing to inflammatory action, that the spinal marrow was exposed in their removal. A probe was now introduced several inches up the posterior surface of the cord, and the same in the lower part meeting with no obstruction, it showed that there was no angular projection of bone into the canal behind. The wound was treated in the same way as in the other case. On May 28th, three days after the operation, he was able to move all the toes of the right foot; on May 31st the foot could be slightly flexed upon the leg. There was a slight return of sensibility on a line two and a half inches lower than before. There has been no improvement in the left foot; all other symptoms remained unimproved, excepting lightning pains in the abdominal walls, below the navel, which made his life almost unbearable; these disappeared after operation, and did not return. During the operation his pulse ran up to 165, but during convalescence his temperature was not above 100° F., and pulse 110.

Query: Should this operation have been done earlier?

[N.B.—Since this paper was read before the Ontario Medical Association great improvement in nearly all his symptoms has taken place. He can move his right and left legs equally well from one side of the bed to the other, is gaining more power (natural) over the bladder and rectum, and in the short time since the operation the case has been attended with most gratifying success.—A.B.W.]

INFLUENZA : ITS GENERAL FEATURES.*

BY L. M. SWEETNAM, M.D.,

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Toronto General Hospital ; Surgeon to St. Michael's Hospital.

Mr. President and Gentlemen :

I TAKE it for granted that the committee, in asking me to open the discussion upon influenza, intended that I should limit myself to a general sketch of the subject ; and prompted by a desire to respect that wish, my paper has become suggestive rather than exhaustive.

Influenza, or the modern plague, as it is sometimes called, certainly is not a modern development. We have descriptions of it from the earliest times. For the past 300 years it has been epidemic in Europe about eight times in each century, and since the year 1173 it has been pandemic fifteen times.

It probably first appeared in America in 1627, when it visited the New England States, the West Indies, and South America. While a moderate temperature, with moisture, would appear to favor the spread of the disease, having become epidemic, it moves on independent of climate, season, or soil, travelling against as well as with the wind. The present epidemic appeared to originate in Bokhara in May, 1889, and reached New York in December of the same year ; since that time it has been more or less constantly with us during the colder months of the year.

For centuries, epidemic after epidemic passed over Europe without leaving any clue to its origin, or the way in which it was propagated. Many attributed it to meteorological conditions, despite the fact that these were different with each epidemic. Others traced it to a miasmatic material in the atmosphere ; but as the number of specific diseases increased and were more closely studied, it was noticed that, like them, the influenza travelled with a velocity that corresponded closely with the rapidity of travel. In Russia and Siberia it moved slowly, but as the network of railways was approached it spread more rapidly, and always along the lines of travel. Like smallpox and diphtheria, it was accompanied by complications and sequelæ which, in the case of these diseases,

*Read before the Ontario Medical Association.

was proven to be due to the presence in the blood of a toxine, the product of a specific micro-organism ; and so it has grown more and more difficult to resist the conclusion that influenza, like them, was due to an organized virus ; that it was a disease "propagated by contact, evolved by the intrinsic operations of a specific poison, and distributed through the ordinary channel of intercourse."

So it was a matter of but little surprise when, in 1892, Pfeiffer and Canon, of Berlin, announced that they had discovered a bacillus which they believed to be the specific cause of the disease. Pfeiffer claims that this is the specific cause of influenza in man, for the following reasons :

(1) They were found in all uncomplicated cases of influenza examined ; they were frequently situated in the protoplasm of the pus corpuscles ; in fatal cases they were found to have penetrated through the bronchial tubes into the peri-bronchitic tissue, and even to the surface of the pleura, where in two cases they were found in pure cultures in the purulent exudation.

(2) They were only found in cases of influenza ; numerous experiments proved their absence in ordinary bronchial catarrh.

(3) The presence of the bacilli corresponded with the course of disease. They disappeared with the cessation of the purulent bronchial secretion.

The prognosis in uncomplicated influenza is good, however desperate the condition may appear, except when met with in the aged, with organic heart disease, cardiac degeneration, or senile weakness. Influenza is certainly a severe test of the vitality of the old, and those advanced in years rarely come through an attack without material impairment of health. All diseases are liable to be complicated in course, by the development of influenza, and many cases pass on to a fatal termination which, were it not for the influenza, would have made a good recovery. The occurrence, then, of influenza, despite the low mortality rate of one per cent., is serious. It leaves the patient in feeble health, and this condition powerfully predisposes to disease. Those who have suffered either from influenza lung, or pneumonia proper (as a complication of influenza), however insignificant the lung difficulty may have been, seem particularly prone to take on tubercular diseases ; and where the presence of this disease has been already demonstrated, its course becomes much more rapid.

Influenza is an acute affection, caused by a specific bacillus, marked by catarrhal, gastric, and nervous symptoms, and showing a marked tendency to develop cardiac asthenia and pneumonia. The prominence, as well as the severity, of the different symptoms varies with the epidemic. While the average attack presents the symptoms of an ordinary coryza, the sneezing and coughing so often the subject of jocular remark are not at all essential symptoms of the disease. In the severer cases the coryza may be absent, and the symptoms are those of acute infection.

So that it is the coincidence of the symptoms which establishes the diagnosis. The nervous symptoms, too, enable us to distinguish influenza from other catarrhal affections. We have headache, usually frontal, wandering pains, as well as those which seemed to take up permanent quarters along the course of the spine, deep-seated bone and muscular pains, a nervous depression altogether out of proportion to the other symptoms (and related, perhaps, to a gastric, hepatic, or intestinal catarrh), which not only brings about an indifference to life, but even a positive desire for the long rest, and too often leads to self-destruction. In the very young I have seen a nervous condition prompting the child to bump its head upon the wall or floor in sheer desperation. These symptoms gave way promptly to bromides and hyoscyamus, and, like other functional troubles, often appeared worse every alternate day. If the trachea and bronchi are not involved from the start, they become so by extension. The catarrhal condition of the respiratory tract distinguishes itself by its universality, extreme irritability, persistence, and tendency to involve the capillary bronchi. Pneumonia and broncho-pneumonia are the most commonly met with complications of the influenza, and then require even more active treatment than when they develop independently of this disease. The cardiac asthenia develops early, while the inflammatory condition subsides more slowly than under ordinary conditions, so that supporting and tonic treatment are indicated almost from the very start. DaCosta describes a lung condition frequently met with in influenza, commonly but incorrectly regarded as pneumonia. "We have then an intense congestion, rapid breathing, persistent cough, fine râles, slight impairment of resonance at the base, with feeble breath sounds; the expectoration is tenacious, but not rusty; if blood be present in the sputum it is in streaks, or in such quantity as to give the sputum the appearance of being made up almost entirely of blood. This is a condition in which the prognosis is much more hopeful than in pneumonia, although pneumonia, especially in those advanced in years, is very apt to develop out of it." The cardiac weakness, sometimes so alarming, even during the acute stage, appears to be due to toxemia, and the weakness and irregularity developing after the acute stage has passed over are probably due to nutritional changes. In some cases we have a blueness of the surface, especially of the fingers, suggestive of Reynaud's disease, due to vaso-motor disturbance, and quite independent of heart weakness.

Delirium in the adult is uncommon, and leads to a more grave prognosis. Coma is met with in cases which afterwards make a good recovery. In one of my cases coma developed in a few minutes without warning, was so complete that needles could be passed into the limbs without any evidence of suffering. The respiration was slow and shallow, and the

pulse at the wrist almost imperceptible. Dissolution seemed so certain and so near that funeral arrangements were made, and yet, after ten or eleven hours, consciousness returned, and the patient recovered.

Another young man became comatose without delirium, the limbs became relaxed, and no muscular action could be provoked. On being placed in the ambulance, that he might be moved to the home of a relative, he appeared distressed, and moved his head. Some twenty hours later he regained consciousness, and afterwards explained that he had had a lifelong dread of being buried alive, and that he must have dreamed that he had been in a hearse, although it appeared almost too realistic to be explained in that way.

The temperature in influenza is not usually alarming in uncomplicated cases. In children it runs higher than in adults. While this statement is true in the main, in some localities the temperature has been exceedingly high, and in twenty-four or thirty hours life has been crushed out by an intense toxemia, the temperature being in the neighborhood of 107° or 108° . The temperature appears to bear some relation to the amount of muscular exertion indulged in. In some cases the temperature appeared unsettled after the disease had apparently passed over, and for weeks, if not months, did not recover its usual uniformity.

A manifest heart weakness often gives a serious aspect to a case of influenza otherwise very mild. The tendency to cardiac asthenia is almost constant in the most severe cases, and is apt to be advanced to irregularity in the presence of pulmonary obstruction.

In the epidemic of 1889-90, many suddenly fatal cases were reported. In some fatal syncope occurred while the patient was upon the night stool, and in others while sitting up to take a dose of medicine. That the circulation is materially disturbed is proven by the quickened and often irregular pulse, and, on auscultation of the heart, irregular murmurs, with a defective first sound and a sharp second, tell of work done under difficulties. A want of synchronism suggests implication of the cardiac ganglia. In the old, intermission and irregularity is noted; in the young, simply increased frequency, with weakness.

As in other diseases due to the presence of a specific organism, cases of influenza are apt to develop nephritis. We may have simply an intense hyperæmia, or a catarrhal and croupous nephritis, as shown by the presence of albumen and hyaline casts. These evidences of actual kidney involvement are not persistent, usually passing off with the attack, and, while commonly seen in the more severe attacks, are not related to the nervous symptoms. When influenza attacks a woman during the menstrual period, as it very frequently does, increased pain and excessive flow are the usual result. Pregnancy secures no immunity, and I am inclined to think that

during the first three months abortion is more apt to occur than not, the emptying of the uterus being due, in my opinion, to excessive contraction from toxine irritation, not from any disease of the decidua, or death of the fœtus, as some cases, taken early, placed in bed, and kept upon uterine sedatives, overcame the tendency to abort, and went to term. After the fourth month a tendency to miscarry is much less marked, occurring before delivery, and extending into the puerperium, or commencing during puerperal period it may simulate sepsis, but the persistence of the lochia, moderate temperature, the bronchitis, depression, muscular pains, cephalalgia, enable one to diagnose influenza. Fatal cases have been reported, and we were unfortunate enough to meet with one, occurring on the third day, from heart failure, the influenza antedating delivery. The patient had been in poor health for some months, and came of a distinctly neurotic family.

"The evil that men do lives after them," and, as Gowers has very well added, "this is as true of individual maladies as individual men." Perhaps no disease is so often followed by sequelæ as influenza. Two facts worth remembering in this connection are: (1) That the most troublesome sequelæ may follow the mildest attack of the influenza; (2) that the second or third attack is more liable to develop these sequelæ than the first. The sequelæ most frequently met with are primary neuralgia (independent of neuritis), post-influenzal supraorbital, supra-maxillary, ophthalmic, cervico-occipital, and cervico-brachial neuralgia. We have also intercostal neuralgia, sometimes so intense as to cause gasping dyspnœa. We, too, have fibrous rheumatism as a sequel of influenza, chronic rheumatism of the fibrous tissue of the erector muscles of the spine. This inflammation, spreading downward along the fascia at the sciatic notch, may attack the sheath and interstitial fibrous tissue of the nerve, giving rise to sciatic neuritis, with all its well-known and intractable symptoms. Among the other nervous sequelæ we have peripheral neuritis, which differs from that induced by simple poisons, as alcohol and arsenic, in that it involves, sometimes, the muscles of the face. The systemic condition, of which the fibrous rheumatism is but a local indication, is probably brought about by degenerative changes in the organs interested in the elaboration of food, and also by an altered tissue change, these combining to bring about a form of toxemia with which the excretory organs are unable to cope.

As has been proven by post-mortem examinations, serious lesions may occur to the spinal cord and its meninges, and, if this be true of the cord, it is probably also true of the cerebral and sympathetic centres as well, and also of any portion of any nerve's trunk. While many illnesses are distinctly traceable to the influenza, others, no doubt, so explained,

develop out of the weakness consequent upon the disease, but have no direct connection with it. There have also been cases of latent disease so slightly developed as to have altogether escaped notice, which, during or after an attack of influenza, have taken increased activity, and, when discovered, have very naturally, but none the less incorrectly, been attributed to the epidemic.

Except at the beginning of an epidemic, typhoid is the only disease likely to be confounded with influenza, and the marked nervous depression and dejection enable one early to say it is influenza, and it is not typhoid. In children the symptoms are not so easily interpreted; the severe and persistent vomiting suggest meningitis; the vomiting, pharyngitis, coated tongue, and, perhaps, an indistinct rash, for a time make it difficult to exclude scarlet fever. But the after history and the development of other cases of influenza in the same family clear up the diagnosis.

The temptation to use the combined antipyretics and analgesics, phenacetine, antipyrin, and antifebrin, is very great, but these must be employed with extreme caution. Both heart weakness and pulmonary stasis, with œdema, the commonest causes of death in influenza, are intensified by what is commonly considered a very moderate use of this class of remedies. The first and most important element in the treatment of influenza is rest—rest of mind and body as nearly absolute as possible. Next in importance to rest I would place a milk diet, or one made up of milk, eggs, and farinaceous substances, alone or in combination. Milk possesses the advantage of being a mild diuretic, removing waste products. Relapses have been explained by an ill-timed meat meal. Food should be given in small quantities and often. The room is to be kept warm, and the fever, if excessive, to be met with by cold sponging, or one-grain doses of phenacetine, frequently repeated, in combination with alcohol. If there be much gastric disturbances the milk had better be peptonized, and the eggs if given, followed by a preparation of pepsin and bismuth. If the intestinal digestion be at fault, salol and soda, or rhubarb and soda, answer well. If there be diarrhœa, it is promptly corrected by benzo-naphthol and bismuth salicylate in capsule. Only the mildest purgatives are admissible.

Where we have to contend with either form of pneumonia, or the influenza lung, the pneumonia jacket ought to be applied early. Dry cupping is a favorite remedy with many. The wet cup, even in those cases in which cyanosis with a distended right heart indicate obstruction, does not give the relief that might be expected of it. Alcohol is of decided value, and is to be given earlier than in cases of pneumonia without the influenza. If the lung complication be at all extensive, quinine and salts of ammonia will be indicated; but if the stomach be irritable, we shall have to fall back upon strychnine, or a combination of strychnine with Basham's mixture, and, perhaps, strophanthus.

For the heart weakness, independent of lung complication, alcohol stands first ; caffeine citrate in small doses, and not too near bedtime, where there is reason to suspect dilatation.

Cactus grandiflora and nitro-glycerine have been found especially useful in those of advanced years, the former to correct post-influenzal irregularity ; the latter where there is reason to suspect an anginose condition, cardiac or peripheral ; atropia where there is intermission with or without irregularity. Strychnine in tonic doses is useful to all in the absence of tendency to angina ; and lastly, but not least important, I would say, encourage cheerfulness, and avoid frequent or prolonged heart examinations.

Selected Articles.

THE DIETETIC TREATMENT OF DIABETES MELLITUS.

TWO well-marked forms of diabetes mellitus have long been recognized: A mild form, in which a strict diet (containing no carbohydrates) causes the sugar to disappear from the urine; and a severe form, in which complete exclusion of carbohydrates from the food does not arrest the sugar excretion. In the severe form frequently there is great wasting and loss of strength; acetone and diacetic acid are very often present in the urine. The value of a strict diet in the mild forms is generally acknowledged, but for some years the opinion has gradually been gaining ground (especially in Germany) that a very strict diet is dangerous in the severe forms of diabetes. Recently a number of valuable papers and monographs have appeared in Germany on this subject.

Leo has pointed out that in the majority of severe cases of diabetes there is a great increase of the nitrogenous metabolism, and, as a result, a great loss of strength. The aim of treatment ought to be to diminish not only the excretion of sugar, but also the nitrogenous metabolism.

The fatty foodstuffs are well known to diminish the nitrogenous metabolism, and Leo has shown that carbohydrates have a similar action (albumen-sparing influence). This action of the carbohydrates Leo has demonstrated in two severe cases of diabetes. For some days the patient was kept on a uniform diet, rich in albumen, but containing very little carbohydrate. The nitrogenous excretion was estimated, and after this had become uniform a definite quantity of carbohydrates was allowed in addition to the previous diet. The nitrogen in the urine and fæces was carefully estimated, and the results showed that the nitrogenous excretion in the urine was diminished distinctly when the carbohydrates were added to the food.

Careful observations have shown that improvement may occur, and the patient gain in weight, in severe cases of diabetes when carbohydrates

are allowed, even though the amount of sugar may be increased in the urine.

The author believes that this improvement is in part due to diminished nitrogenous metabolism, to a limitation of albumen destruction, brought about by the above-mentioned albumen-sparing action of the carbohydrates.

Hence, in the treatment of severe cases of diabetes, not only should the sugar excretion be daily estimated, but also the general condition of the patient, the body weight, and the quantity of urine and nitrogenous waste should be carefully watched. These latter should be taken as a guide in treatment, as well as the amount of sugar excreted.

Ebstein long ago pointed out the great danger of a rigid albuminous diet in severe forms of diabetes. He also draws attention to the danger of placing the patient suddenly on a strict diet, in order to determine to which variety of diabetes the case belongs. This sudden change would not be dangerous in a mild disease, but in the severe form of the disease might lead to coma. Ebstein changes the diet gradually, the more slowly the more serious the case is. In serious cases, he employs an albuminous diet very gradually. The milder the case is, the more rigidly ought a diabetic diet to be enforced. The presence of acetone or diacetic acid (as shown by Gerhardt's reaction, brownish-red coloration with perchloride of iron) is an indication that a strict diet would be dangerous. The appearance for the first time, or the increase, of these substances in the urine is an indication for diminishing the albumen and increasing the carbohydrates in the diet.

Hirschfeld has shown that acetonuria can be produced in healthy persons by a diet consisting of albumen and fat only. The addition of carbohydrates to the food prevents the occurrence of acetone in the urine. When acetone is present in a large quantity in the urine, diacetic acid is also found.

In those cases of diabetes in which the carbohydrates are for the most part no longer burnt up in the system, a large quantity of acetone is often found in the urine, in spite of the carbohydrates in the food. When the diet contains a very large amount of carbohydrates, or when glycerine is added to the food, the acetone or diacetic acid diminish in the urine.

Hirschfeld believes that, in diabetes, coma is favored by the exclusion of carbohydrates from the diet. In cases of diabetes in which the excretion of acetone is great, a strict diet ought not to be advised, but moderate quantities of carbohydrates should always be allowed. When early symptoms of coma appear, Hirschfeld also suggests the use of glycerine (100-150 grammes daily, in black coffee), since he found in the experiments on healthy persons above mentioned that glycerine causes the acetone to disappear from the urine.

Hirschfeld does not recognize any form of acetonuria except the diabetic. In all other diseases (fever, cancer, and diseases of the stomach) in which acetonuria has been described, he believes the condition to be due to deficiency of carbohydrates in the food. In all cases of this kind a diet containing carbohydrates (starch and sugar) causes the acetone to disappear.

Schmitz has drawn attention to the danger of an unduly large amount of animal food in diabetes. The stomach is unable to digest such large quantities, which pass into the intestines undigested. As a consequence, putrefaction occurs, and poisonous substances are formed and then absorbed into the blood. Schmitz believes that diabetic coma is due to the absorption of these toxic substances.

Schmitz points out the difference in the day urine and night urine in the mild and the severe forms of diabetes. In the severe forms of diabetes, the night urine (*i.e.*, that passed in the morning before breakfast—about eight hours after a meal) contains the greatest amount of sugar; whilst the urine passed after breakfast and in the course of the day up to bedtime, contains, as a rule, less sugar, even though carbohydrates are taken during the day. In the mild form of glycosuria, in which the sugar is formed from the carbohydrate of the food, and not from albumen, the condition of the urine is otherwise. The night urine contains constantly much less sugar than the day urine, and is often quite free from sugar; whilst the sugar eaten during the day appears in the urine a few hours after it is taken.

Sugar appearing in the urine eight hours after a meal is formed from albuminates, and is a special sign of the severe form of diabetes.

In the mild forms of glycosuria, by a strict anti-diabetic diet, the sugar in the day urine diminishes, and in a short time disappears entirely; whilst in the severe forms, the sugar of the night urine (the urine passed about eight hours after the last meal) is diminished very little or not at all, and if much albumen has been taken during the previous day it may be increased, even though carbohydrates have been absent from the food.

Also in the severe forms of diabetes, acetone and diacetic acid are present in the urine in considerable quantities; whilst they are absent, or only very seldom present, in mild forms. The well-nourished condition of patients in the mild form is pointed out, and the severe general symptoms in the grave forms are referred to. Owing to these clinical differences Schmitz thinks that the origin of the disease is not the same in these two groups.

By a strict diet the best results are obtained in the mild forms of the disease; but in the severe forms a pure animal diet is directly injurious,

both as regards the general condition of the patient and the amount of sugar in the urine.

In the severe form of diabetes, Schmitz allows his patients to take food containing starch, and fat in large quantities, but only a small quantity of albumen. By such a diet he finds that the general condition of the patient is much improved. The body weight and the appetite increase; acetone and diacetic acid disappear from the urine, or only traces remain; and, in spite of carbohydrates in the food, the sugar diminishes. Schmitz only allows food which contains sugar when the amount contained is very small, but foods containing starch he allows (though never in very great quantities). The withdrawal of starch-containing food he regards as injurious in this severe form of the disease.

Illustrative cases of severe diabetes are given, showing how the general symptoms and the glycosuria became worse on a strict diet containing a large quantity of animal food and green vegetables, whilst by limiting the animal food and allowing starch-containing food the general condition improved, and the sugar in the urine diminished.

Schmitz, Klemperer, and others, have drawn attention to the great value of cod liver oil as a fatty food in diabetes. This is an old remedy, which strangely has never been largely employed in the treatment of diabetes. If the patient cannot take cod liver oil, lipanin may be given in its place.

Schmitz considers all fruits and other articles of food containing the various forms of sugar most injurious. Starch is the only carbohydrate which he would allow, and he considers that a certain amount of starchy food is necessary for every man.

In severe cases of diabetes, therefore, Schmitz would allow starch-containing food, which he considers of great importance, but he would limit the amount of animal food. Whilst in the mild cases of diabetes he would almost reverse the treatment, and withdraw carbohydrates from the food, *i.e.*, he would give the usual strict diet.

Karl Grube, of Neuenahr, has also drawn attention to the importance of carbohydrates in severe cases: "It has long been known from experience that in very advanced cases, in which diabetic coma is imminent, it is absolutely necessary to give chiefly food containing a large quantity of carbohydrates." He refers to the experiments of Hirschfeld above mentioned.

In severe cases, in which acetone and diacetic acid are present in the urine, and in which there is great danger of diabetic coma, Grube believes that the only way to prevent the acetonuria developing into diabetic coma is by impregnating the system with carbohydrates. A case is reported in which, after a rigid diet, symptoms pointing to commence-

ment of diabetic coma developed. Grube advised the patient to take but little meat or fish, once a day, no eggs, but as many potatoes as he liked, and one ounce of bread twice a day. Afterwards half the amount of bread was allowed. The patient improved very much, and the sugar in the urine diminished; the improvement had continued three months later. Grube believes it to be one of the greatest mistakes, in severe and advanced cases of diabetes, to keep the patient on a diet consisting purely of meat, fish, eggs, and such substitutes for bread as gluten bread, etc. In these cases Grube allows potatoes at least twice a day in moderate quantities. Three other cases are reported as examples of the value of carbohydrates (in the form of potatoes) in the severe forms, where there are symptoms pointing to the onset of diabetic coma.

In the mild forms of the disease the great value of rigid diet is generally acknowledged; but even in this form there is a tendency to regard, as the essential point, great limitation of the carbohydrates, rather than total exclusion. The chief difficulty in a rigid diet—*i.e.*, one from which carbohydrates are excluded or greatly limited—is met with in regard to bread.

Many substances have from time to time been employed (gluten bread, bran cakes, almond bread, etc.). The great objections to these breads are: (1) They are mostly exceedingly expensive; (2) they are often very unreliable; (3) they are not tolerated for any length of time by the patient. With a very little trouble a diabetic patient can have a number of diabetic breads and cakes prepared at his own home, and such home-made preparations are more reliable, less expensive, and more palatable than the majority of those so largely advertised by various firms. Ebstein has drawn attention to the value of a substance named, in Germany, *aleuronat* (*aleuron* = flour). This is a vegetable albumen prepared from wheat by a chemist, Dr. Hundhausen. From this substance bread can be baked by the addition of ordinary flour. It is a cheap form of albumen, and can be used as a substitute for ordinary flour in the preparation of soups, sauces, etc. It is a yellowish powder, and contains from 80 to 90 per cent. of albumen in the dry substance. (*Aleuronat* can be obtained from R. Hundhausen, Hamm, Westphalia, Germany. A parcel containing 4½ kilos. is sent, post free, for seven shillings.)

Ebstein gives directions for the preparation of *aleuronat* breads containing 27.5 per cent. and 50 per cent. of albumen in the dry substance.

The following are the directions for the preparation of bread containing about 50 per cent. of albumen in the dry substance. *Aleuronat* and white flour are mixed in equal quantities:

- 200 grams white flour = about 7 oz.
- 200 grams aleuronat = about 7 oz.
- 125 grams butter (of the best quality) = about 5 oz.
- 1 teaspoonful of salt.
- 20 grams of baking powder.

The flour and aleuronat are mixed in a dish warmed to a temperature of about 30° C., and the melted butter and milk (made lukewarm) gradually added, then the salt, and finally the baking powder (one part of sodium bicarbonate and two parts of cream of tartar). The dough is well mixed, then formed into loaves, and baked at a good heat.

I have recently had prepared cakes composed of aleuronat and cocoanut powder. These are very palatable, very cheap, and are practically free from starch :

- 2 oz. of the finest desiccated cocoanut powder.
- 2 oz. of aleuronat.
- 1 egg.
- A little milk.

The egg is beaten up, and the aleuronat and cocoanut powder added, together with a very small quantity of milk. The mass is stirred together until a dough is formed. This is cut into thin cakes and baked. The addition of milk is not necessary.

[Fine desiccated cocoanut powder can be obtained from Messrs. Lyon & Sons, 4 Bath Passage, Birmingham, price 4½d. per lb., in tins containing 112 to 130 lbs.]

Pavy long ago recommended almond cakes as a substitute for bread in diabetes. The sweet almond contains 9 per cent. of sugar and dextrine, but by washing the meal with boiling acidified water the greater part of the sugar is extracted. Almond meal washed in this manner is almost free from carbohydrate. It contains 24 per cent. emulsion and 54 per cent. of fat.

Owing to the large quantity of fat which they contain, these almond cakes are not easy to digest. Another objection is the price. Only wealthy patients can afford them.

Seegen gives the following directions for the preparation of almond cakes :

125 grammes (about ¼ lb.) of sweet almonds are ground as fine as possible in a stone mortar. To remove the small quantity of sugar which the almonds contain, the pounded mass is enclosed in a linen bag, and this is soaked for a quarter of an hour in boiling water to which a few drops of acetic acid have been added. The almond meal is then mixed well with 3 oz. of butter and 2 eggs. Then yolk of 3 eggs and some

salt are added, and the mixture thoroughly well beaten up. The white of three eggs is beaten up into a froth and then mixed with the above. The mass is divided into cakes and baked by a gentle fire.

Saundby gives the following directions for the preparation of almond cakes :

- 1 lb. of ground almonds.
- 4 eggs.
- 2 tablespoonfuls of milk.
- A pinch of salt.

Beat up the eggs and stir in the almond flour. Divide in 12 flat tins, and bake in a moderate oven for about 45 minutes.

A pound and a half of cakes prepared in this manner costs 1s. 9d.

Saundby also gives directions for the preparation of cocoanut cakes :

- $\frac{3}{4}$ lb. finest desiccated cocoanut.
- $\frac{1}{4}$ lb. ground almonds.
- 6 eggs.
- $\frac{1}{2}$ teacup of milk.

Beat up the eggs, and stir in the cocoanut and almond flour. Divide into 16 flat tins, and bake 25 minutes in a moderate oven.

Desiccated cocoanut costs $4\frac{1}{2}$ d. per lb., and the cost of $1\frac{1}{2}$ lbs. of the above cake is 1s. 2d.

In Iceland and Lapland, Iceland moss (*cetraria*), deprived of its bitter principle, is used as an article of diet. The soluble portion is taken up by boiling water, and the decoction, in cooling, thickens and deposits a gelatinous mass. The soluble gelatinous substance is known as lichenin.

Saundby has published directions for the preparation of a pudding made from Iceland moss, which is much appreciated by diabetic patients.

For three hours the Iceland moss is soaked in water, then boiled in milk for three-quarters of an hour, strained, and poured into a mould and allowed to go cold. It may be sweetened, if necessary, with glycerine or saccharine.—R. T. WILLIAMSON, in *Medical Chronicle*.

A WORD IN SEASON TO BATHERS.

OWING to the inclemency of the season bathing machines, even on the south coast, are yet few and strange, like early swallows in the spring. The postponement of the bathing season, however, is not without compensating advantages. A series of observations recently made at Peterhead by the Scottish Meteorological Society every day during a period of four years and nine months show that the summer warmth penetrates the sea very gradually. The sea water attains its maximum warmth only at the end of August. From that time it becomes warmer than the air. The water also cools more slowly than the atmosphere, so that in November the average temperature of the water is 6° and in December 7° higher than that of the air. The moral is that bathing is more dangerous on the warm days of early summer than on chilly days in the late autumn. The sea is as warm at the end of October as it is in the middle of June, and the period between these dates may be taken as the normal bathing season. In the case of persons of average health there is little fear of harm being done by bathing, if the precautions dictated by common sense and ratified by common experience are observed. One thing, however, which even experienced bathers often fail to realize is that swimming in the open sea is really a violent form of exercise. At the beginning of the season, therefore, it is well to acclimatize oneself by degrees, just as mountain climbers go through a little preliminary training before they get to business. It is in the early dips of the season that "cramp" is most to be dreaded. There is a good deal of misconception as to the nature of "cramp," which has led some persons, who, like the Homeric heroes, rejoice in their strength, to laugh at it as a "bogey." It may be admitted that ordinary cramp in the calf of the leg, though likely enough to give a timid person the notion that he is in the grip of some monster of the deep, is not a very formidable matter to any one in whom familiarity with the water has bred confidence. This is not, however, the "cramp" which makes a strong swimmer suddenly throw up his hands and sink at once to a watery grave. It is impossible to say with certainty what takes place in these circumstances. The accident is probably due to failure of the heart's action, perhaps the result of spasm of the cardiac muscle—

"cramp" of the heart. Another view is that the cause of drowning is perforation of the drum of the ear by the pressure of the water, followed by vertigo and sudden unconsciousness. However this may be, there can be no doubt that among the dangers of bathing a prominent place must be given to the possibility of mischief being done to the delicate structures of the ear. Dr. Laurence Turnbull, the well-known otologist of Philadelphia, has recently pointed out that if the water which enters the ears in bathing is not removed (by leaning the head on one side and drawing the external ear forcibly outwards, at the same time shaking the head and opening the mouth, also striking the ear with the palm of the hand) it is apt, as the water decomposes, to cause inflammation, followed by perforation of the membrana tympani; or the suppurative process, if neglected, may pass inward to the middle ear, cochlea, and labyrinth, destroying the organ of hearing, and finally implicating the brain. Dr. Turnbull gives a formidable list of diseases of the ear traceable to the abuse of sea-bathing—that is, bathing too frequently and remaining too long in the water. These range from impaction of wax to exostosis of the meatus, an affection which is especially common in those who indulge in the fierce delight of the "header." Dr. Turnbull advises that the ears, especially if they are at all tender or diseased, should always be protected in bathing. For this purpose, ladies should wear an oilskin cap covering their ears, and men should close the aperture of the ear with a piece of cotton wool or other simple plug, which can be taken out on leaving the water. For surf bathing especially, and for those who like to float on their backs, such protection of the ears is a necessary measure of precaution.—*Editorial Note in British Medical Journal.*

Progress of Medicine.

MEDICINE

IN CHARGE OF

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CIRRHOSIS OF THE LIVER.

Dr. Graham Steel, after relating a cure of cirrhosis of the liver complicated by septic endocarditis, makes the following comments: The case above related is the first under my own observation in which ulceration or septic endocarditis had been the apparent cause of pyrexia in the course of cirrhosis of the liver. It would seem that in a few cases interstitial hepatitis itself is accompanied by a certain amount of pyrexia, as in a case referred to in the appendix of Murchison's "Lectures on Diseases of the Liver," but long-maintained fever should always lead to the suspicion of complication,* and in my experience tuberculosis of the peritoneum (with or without tubercle in the lungs or elsewhere) is one of the most common complications. I have met with this complication in quite elderly people, as well as in younger, the lungs being unaffected. We are almost forced to the conclusion that cirrhosis of the liver in some way predisposes to the development of tubercle in the peritoneum, and, in relation to the venous stasis, it is curious to note that venous stasis is supposed to be inimical to the deposition of tubercle in the lungs, so as to explain the rarity of pulmonary tuberculosis in combination with heart disease. There is a widely-spread popular belief that alcohol protects from "consumption." My experience would lead me to the opposite conclusion, provided that the alcohol is taken to excess. I readily admit

* I do not refer to cases of obstruction or irritation of the biliary passages.

that alcohol is often most useful in the carrying out of the "restorative" treatment of pulmonary tuberculosis, which aims at promoting the "resisting power of the tissues." But this is a different matter from the abuse of alcohol, which almost invariably leads to interference with the taking of food, and to a depraved nutrition, associated with lowered vitality, and, consequently, diminished resisting power. Alcohol unquestionably relieves a laboring heart for the time, whether by directly stimulating its contraction or by indirectly lightening its burden by virtue of peripheral vessel dilatation we need not stop to discuss. But, quite as unquestionably, the abuse of alcohol—the habit of alcoholism—acts injuriously on the heart, and ultimately leads to heart failure. Alcohol, again, may enable an anæmic brain to do better work for a time by "flushing" the organ, but I think it is the experience of most of us that in the end the function of the brain cells is impeded rather than promoted by it. I fancy there are very few individuals who can put forth their best mental work under the brain-flushing influence of alcohol, and not one who derives benefit from its influence on the brain cells themselves. It has always seemed to me that opium is a much more "intellectual" stimulant than alcohol. I would even deny that alcohol is an "intellectual" stimulant at all save by its brain-flushing property. Its action on the protoplasm of the brain cells seems to be all in the opposite direction. Within the last twelve months two typical cases of alcoholic heart failure under my observation, after recovery from the cardiac condition, have died of tuberculosis—one, in middle life, of very acute tuberculosis; the other older, of a less acute tuberculosis. I only state these facts, and draw no conclusions from them. My present belief is that the abuse of alcohol, by promoting a depraved nutrition, renders the organism susceptible to the attack of tubercle, but that the judicious use of alcohol may prove most valuable in the treatment of tuberculosis by promoting nutrition and thereby increasing the resisting power of the tissues. But my present subject is the frequent (from my own observation I am entitled to call it so) association of peritoneal tuberculosis with cirrhosis of the liver. When a high temperature is found in a case of cirrhosis of the liver, and there is no other obvious cause for the pyrexia, the possibility of tuberculosis should always be entertained, and this, too, whether evidence of pulmonary tuberculosis be present or absent. The dogma that when there is peritoneal tuberculosis there is also pulmonary tuberculosis is not infallible pathologically: it is still less reliable clinically, for a focus of disease in the lung is often quite latent, both as regards symptoms and physical signs. The history, however, of such a symptom as hæmoptysis may prove of great value in diagnosis.—*Medical Chronicle*.

THE TREATMENT OF PRURITUS VULVÆ.

(1) If diabetic, try specific treatment and diet, with warm lotions locally.

(2) If connected with a chronic eczema of the genital organs, a gonorrhœal vaginitis, a chronic vaginitis with leucorrhœal discharge or vaginismus (with hysterical symptoms), suppress all exciting diëts. If there is abundant discharge, inject night and morning 3-4 pints warm (45°C.) permanganate of potash solution (1 : 1000). Use three times a day the following lotion :

Water.....	450	grams. or parts.
Alcohol.....	50	"
Mercuric chloride.....	1	"
Indigo carmine.....	.05	"

If burning or itching come on (especially during second half of night) wash with water as hot as possible. Abstain from all pomades, ointments, etc., which by their fermentation, etc., increase the irritation.—*Medical Chronicle*.

THERAPEUTICS

IN CHARGE OF

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SOMATOSE.

Hildebrand (*Therapeutische Monatscheft*, June, 1894) strongly recommends the new preparation, somatose, in stomach and bowel troubles. It is more nearly allied to albumen than to pepton, and has none of the toxic effects of pure pepton. It is an excellent remedy against the loss of albumen in the body, and is well borne, even in very large doses, for a long time.

OREXIN, TENCRIN, AND PAPAIN.

These three remedies are mentioned as stomachics, improving the appetite and digestion.

Orexin has been strongly advocated, during the last two years, for increasing the appetite. Henzoldt recommends the basic orexin instead of the muriate because it is more agreeable to the stomach. He gives about five grains, finely powdered in water, with a cup of milk or bouillon, in the forenoon. In cases of very sensitive stomach, or if there be irritation of the kidney, he begins with smaller doses—about two grains. Much larger doses are also often given. The good effect is not noticed at once, usually not until the medicine has been given four or five days consecutively. Vomiting occurred in an occasional case, but disappeared after continued use. Orexin is not indicated in *ulcus ventriculi* and superacidity, but is especially indicated in anæmic conditions, in beginning phthisis, and cases of phthisis which run a very chronic course, in functional neuroses, and in convalescence. It was decidedly effective in twenty-seven out of thirty-seven cases, the success in many being very striking.

Tencrin (ext. tencrīi scordii dep.) has been administered by Mosetig in doses of one and one-half grains with success.

Papain (from carica papaya). In catarrh of the stomach, carcinoma, ectasia ventriculi—in fact, in all diseases of the stomach in which meat gives rise to dyspeptic symptoms, Sittmann found tencrin to have good effect. It is a whitish-yellow powder, with a flavor of meat extract, whose special action consists in dissolving albumen. It is given in doses of five to eight grains, immediately after each meal. It relieves the pain in the stomach, and improves the appetite.

THE PHYSIOLOGICAL ACTIONS OF ALCOHOL.

Dr. David Cerna, in a paper on the physiological action of alcohol, read at the Pan-American Congress, concludes his very able paper as follows :

(1) Alcohol in small amounts excites and in large doses depresses both the peripheral motor and sensory nerves.

(2) Excessive quantities cause a spiral degeneration of the axis-cylinder of nerve-fibres.

(3) Reflex action is at first increased and afterwards diminished by an influence exercised by the drug upon the spinal cord and the nerves.

(4) In small amounts the drug stimulates the cerebral functions ; it afterwards, especially in large quantities, depresses and finally abolishes them.

(5) Alcohol causes lack of co-ordination by depressing both the brain and the spinal cord.

(6) In toxic doses alcohol produces hyperæmia of both brain and spinal cord, especially of the lumbar enlargement of the latter.

(7) Small doses of alcohol produce increased rapidity of the cardiac beat ; large amounts, a depression of the same. In either case the effect is brought about mainly through a direct cardiac action.

(8) The drug in small quantities causes a rise of the arterial pressure by a direct action upon the heart ; in large amounts it depresses the arterial pressure similarly through a cardiac influence.

(9) In large doses alcohol enhances coagulation of the blood ; in toxic quantities it destroys the ozonizing power of this fluid, causing a separation of the hæmoglobin from the corpuscles.

(10) Alcohol in small doses has little or no effect on the respiratory function ; in large amounts it produces a depression of both rate and depth of the respiration through a direct action on the centres in the medulla oblongata.

(11) The drug kills by failure of the respiration.

(12) On the elimination of carbon dioxide alcohol exercises a varying action, sometimes increasing, sometimes decreasing, such elimination.

(13) The action of alcohol on the amount of oxygen absorbed also varies, and may be said to be practically unknown.

(14) The drug lessens the excretion of tissue waste, both in health and disease.

(15) In small amounts alcohol increases the bodily temperature ; in large doses it diminishes the same. The fall of bodily temperature is due mainly to an excess of heat dissipation caused by the drug.

(16) Alcohol, in sufficiently large amounts, has a decided antipyretic action.

(17) In moderate amounts alcohol aids the digestive processes.

(18) Alcohol diminishes the absorption of fats.

(19) The drug exercises a varying influence on the amount of urine secreted, but it probably increases the activity of the kidneys.

(20) In large doses, or when continuously used for a long time, alcohol produces cirrhotic changes of hepatic especially and paralysis of spinal origin. It also causes insanity, epilepsy, and other maladies.

(21) Alcohol is mainly burnt up in the system when taken in moderate quantities, but when ingested in excessive amounts it is partly eliminated by the breath, the kidneys, and the intestines.

(22) Alcohol is a conservator of tissue, a generator of vital force, and may therefore be considered as a food.—*Therapeutic Gazette*.

COMPOUND TINCTURE OF COAL TAR.

Dr. Louis A. Duhring and Mr. J. M. Baer, apothecary, have made a series of investigations with a view of obtaining the most desirable and elegant pharmaceutical and therapeutical preparation for external use. The result of their investigations is published in the *American Journal of the Medical Sciences*, May, 1894. After describing the methods of procedure in the experiments, and reviewing the different preparations now on the market, the following conclusions are arrived at :

Conclusions. Summing up the result of these investigations, we may conclude :

(1) That the best tincture of coal tar is made with the aid of tincture of quillaia.

(2) That the strength of the tincture of quillaia should be 1 : 4, with 95 per cent. alcohol.

(3) That the coal tar (1 part) should be digested with the tincture of quillaia (6 parts), with frequent agitation, for not less than eight days, and preferably for a longer period, and finally filtered.

(4) The resultant product is a brown-black, clear tincture, which, upon the addition of water, forms a cleanly yellowish emulsion, the color and certain other characters varying with the kind of coal tar employed.

(5) The tincture is stimulating, and is prescribed usually largely diluted, with from 10 to 60 parts of water, as a wash, and is useful where tar is indicated, as in certain forms of eczema, psoriasis, pruritus, and in other inflammatory diseases of the skin. It is often more useful when employed weak than strong.

(6) This preparation, which may be designated as "compound tincture of coal tar," takes the place of several similarly composed proprietary preparations known as "liquor carbonis detergens," and "coal tar saponiné."

IODOFORM.

Formulæ in use by author. Iodoform gauze: Soak a piece of gauze, ten metres in length, previously sterilized by boiling in the following solution: Sulphuric ether, 700 grammes ($22\frac{1}{2}$ fluid ounces); glycerine, 100 grammes ($3\frac{1}{4}$ fluid ounces); iodoform, 50 grammes ($1\frac{1}{2}$ fluid ounces). Wring out and hang up in a dark room at a temperature of 30° C. (86° F.). Ethereal solution of iodoform for injections: Sulphuric ether, 95 or 90 parts; iodoform, 5 or 10 parts. Iodoform vaseline: White vaseline, 90 to 97 grammes (3 to $3\frac{1}{4}$ ounces); triturated iodoform, 10 to 3 grammes ($2\frac{1}{2}$ to $\frac{3}{4}$ drachms). Iodoform collodion: Collodion, 10 grammes ($2\frac{1}{2}$ drachms); iodoform, 1 gramme ($15\frac{1}{2}$ grains). Hard iodoform crayons (formula of the Bichât Hospital): Powdered iodoform, 10 grammes ($2\frac{1}{2}$ drachms); gum tragacanth, 0.50 gramme ($7\frac{3}{4}$ grains); pure glycerine, sterilized water, aa q.s. as little as possible. Soft iodoform crayons: Iodoform, 8 grammes (2 drachms); gelatine or cacao butter, 2 grammes (31 grains).—*Terrier, La Union Médicale*, December 30, 1893.

TREATMENT OF SUNSTROKE.

The conditions of sunstroke are an immoderate heating of the blood, and, consequently, of the whole body. The heat stimulates the heart ganglia, and, through these, the heart muscle, which is already overworked, and paralysis of the heart, from exhaustion, follows. The immoderate heat also irritates the various nerve centres of the brain, and thus produces general convulsions, etc.

Koerfer (*Therapeutische Monatsheft*, June, 1894) prescribes prolonged chloroform narcosis to reduce the irritability of the heart ganglia and nerve centres, and then the ordinary therapeutic measures; e.g., cool baths, large amount of fluids (per anum, if necessary), ether and camphor injections, etc. Hirschfeld recommends, instead of the cold bath, a prolonged warm bath, the temperature of which is very slowly lowered, and venesection, if there be œdema of lungs or brain.

HEART DISEASE.

Pawinski (*Therapeutische Monatschrift*) compares caffein natrio-salicylate with strophanthus and digitalis as follows :

In valvular diseases of the heart, with disturbance of compensation, digitalis and strophanthus are superior to caffein, but the latter can often do good service when the former are contraindicated.

In respect to regulating the heart rhythm, caffein is also inferior to the others ; but in respect to excitation of diuresis, it is much superior. The best field for the administration of caffein is in diseases of the heart muscle, either functional or degenerative, and especially in the early stages of the disease. But in the later stages, when the heart, in consequence of progressive degeneration of the muscle fibres, is not able to perform its duty, and there are œdema, dyspnœa, and dilatation, then we must resort to digitalis.

Caffein is also indicated in acute insufficiency in patients whose circulatory system is otherwise healthy, such as after severe mental strain, moral commotion, and especially during fevers. In many cases, also, caffein produces a pleasant narcotic effect.

THE VALUE OF BOILED MILK AS AN ARTICLE OF DIET.

Every practitioner of medicine knows that in the treatment of certain cases of diarrhœa, where an absolute milk diet is required, better results follow the use of boiled milk than of raw milk, and for this reason it has become a popular idea among the laity and members of the profession that cooked milk is the more digestible. However this may be in clinical experience, it is certain that experimental research does not justify this conclusion. Ten years ago the late Dr. Randolph, of Philadelphia, made an interesting series of experiments to determine this point. A number of men in perfect health were given raw milk to drink ; an equal number, equally healthy, were given a similar quantity of boiled milk. An equal time after the ingestion of the liquid a hypodermic injection of apomorphine was administered to each, and a careful examination made of the vomited matters to determine how far the process of digestion had proceeded. In every instance it was found that the raw milk was more digested than the cooked, and as Randolph graphically expressed it : " We obtained proof that in making milk, nature made that compound most easy of digestion."

The experiments of Crolas, on the other hand, seem to point to a different result, for he believes as a result of his studies that boiling has no action whatever on the casein or lactose, and removes from the liquid a small quantity of butter, which is entangled with the film of albumin

which forms on the surface of the milk. He also thinks that boiling increases the quantity of the free soluble phosphates, and concludes, in opposition to the studies of Randolph, that boiled milk is equivalent, if not superior, to raw milk.

The correct solution of the problem probably lies in the class of cases to which the milk is administered. There is no doubt whatever that raw milk is more digestible than boiled to the healthy individual, and it is an undeniable fact that boiled milk is far more constipating, and that an attempt to place a patient upon a diet of boiled milk would more certainly tend to disorder digestion and assimilation than a similar attempt with the raw article. In Bright's disease, diabetes, and similar conditions in which a milk diet is desirable, we may therefore conclude that raw milk is the liquid to be employed, whereas, in cases of diarrhœa, the boiled milk is by far the best preparation. We have already pointed out in earlier leading articles that both raw and boiled milk have their digestibility very much increased by being somewhat diluted with any sparkling water, or by the addition of a sufficient quantity of salt to give a distinct flavor.—*Therapeutic Gazette*.

THE ADMINISTRATION OF SODIUM SALICYLATE IN RHEUMATISM.

In Ziemssen's clinic the salicylate of soda is given per rectum in cases where it is not well borne by the stomach, or from any cause administration per os is contraindicated. When necessary, the rectum is first cleared out, and then, by means of a 7-inch sound, a solution of six to eight grams natrio-salicylate in 100 c.c.m. of water, to which $1\frac{1}{2}$ grams tr. opii is added, is injected. The results are excellent.

Ruel recommends, in such cases, the local application of acid salicyl., and claims as good results as when administered internally. The following salve may be used twice a day, and covered over with oiled silk or any impermeable stuff: Acid salicyl., 10 to 30 grams; alcohol abs., 100; ol. Riemi, 200; chloroform, 10 to 15. Bourget also found the external application of salicylic acid to the affected joint very effective, and recommends it very highly. He applies an ointment similar to the above, and combines with it the internal administration of 1 to 2 grams of salacetol daily.

Salacetol is a new salicylic preparation, which is highly recommended as an intestinal antiseptic.—*Therapeutische Monatschrift*, June, 1894.

OBSTETRICS

IN CHARGE OF

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THE TREATMENT OF SEVERE ALBUMINURIA ASSOCIATED WITH PREGNANCY.

In a paper read before the London Obstetrical Society, Dr. Herman concluded a valuable series of observations on albuminuria associated with pregnancy and labor. Every practitioner who observes his cases must have noticed that there are at least two main groups of kidney disease in this association. Albuminuria, in a more or less marked degree, is a very common complication of pregnancy, but in a large proportion, the majority, of the cases it does not lead to any of the graver symptoms to which pregnant albuminuric women are liable. In a certain number of such patients, however, not only is the disease acute in its onset and violent in its manifestations, but we get the dreaded eclamptic convulsions which threaten the life of the mother and jeopardize that of the unborn infant. The risks dependent upon the renal disease are, then—first, the life of the mother; secondly, that of the foetus; and, lastly, the danger of the acute phase giving place to a chronic form of Bright's disease after delivery. The main points which still call for discussion are the means of distinguishing between the cases which are likely to comport a grave sequel and the best method of obviating the danger of visual defects and renal disease as a sequel. Dr. Herman tells us that the acute form attacks mainly women who are pregnant for the first time, and he points out that when the albumin in the urine consists mostly of serum albumin the prognosis is grave. It is, therefore, necessary for the practitioner to accustom himself to testing for the presence of paraglobulin as compared with serum albumin. One of the common symptoms associated with the albuminuria of pregnant women, as in albuminuria from other causes, is failure of vision, attributable to the presence of albuminuric retinitis, and

possibly sub-retinal hæmorrhages. In the graver cases this may go on to complete loss of perception of light. Although in most cases the cæcity passes off more or less when delivery has been safely accomplished, this is by no means always the case, and the preservation or protection of sight becomes one of the points to which treatment must be directed. Now, the treatment of the albuminuria of pregnant females is practically confined to the induction of premature labor. As soon as the uterus has been emptied, the symptoms usually promptly subside; indeed, the promptness of this subsidence is one of the most remarkable features of renal disease associated with pregnancy. The speakers, in the discussion that followed, accepted this conclusion, and did not hesitate to recommend that the uterus should be emptied forthwith in all really serious cases of albuminuria associated with pregnancy. The child is sacrificed, it is true, but its chances of survival in the presence of eclampsia, or even of severe albuminuria, are small indeed, so that this fact cannot and ought not to be allowed to weigh in the balance, especially as the mother is thereby rescued from one of the most terrible complications that can threaten the pregnant woman. Then, too, in the cases presenting indications of albuminuric retinitis. These are always severe cases, and most of them die if left unrelieved. Moreover, the further the case is allowed to go on the greater is the damage done to the delicate structures of the eye, and the greater are the risks of permanent impairment of vision. This is a serious point well worthy of consideration, and in future obstetricians will be well advised if they adopt the suggestion to empty the uterus as soon as, at latest, ophthalmoscopic examination reveals the familiar and easily recognized signs of albuminuric retinitis. There remains, as an additional reason for adopting this course, the fact that even in women who either do not have, or who survive, the fits, the kidneys do not always recover from the disturbance to which they have been subjected, and the patient not unfrequently remains the victim of chronic Bright's disease. On these grounds, therefore, severe albuminuria ought to be added to the list of indications for the induction of premature labor without waiting for the supervention of eclamptic convulsions before coming to a decision. This is not a specialist's question. It is one which any practitioner may be called upon to consider at any moment, and it is to be hoped, in the best interests of his patient, that he will henceforth recognize the extreme and manifold gravity of the risks attending the continuance of albuminuria in pregnant women — *The Medical Press*.

THE TREATMENT OF ECLAMPSIA.

Kronig (*Centralblatt für Gynakologie*, April 21, 1894), in discussing the treatment of eclampsia at the Eleventh International Medical Congress

at Rome, stated that as long as so little of the etiology and pathological condition of eclampsia is known, a rational therapeutics cannot be formulated; at present it is limited to the combating of the convulsions. The average mortality by this treatment is from twenty to thirty per cent. He believes that while the convulsions are controlled by narcotics, the eclampsia as such continues to exist. The course of the condition can be unfavorably influenced by large doses of narcotics. In the Leipziger klinik the treatment by morphia has been given up for one and a quarter years. Its place has been taken by forcible delivery in the eclampsia of pregnancy or of labor. In Leipzig to the present time there have been eighteen cases with one death—*i.e.*, 5.5 per cent. mortality. By the use of this method there are two points especially to be observed:

- (1) The controlling of the hemorrhage.
- (2) The observance of asepsis.

In two-thirds of the cases there was more or less violent hemorrhage from cervical tears.

The hemorrhage was controlled in all the cases by tamponnade of the utero-vaginal canal with aseptic gauze. The twenty per cent. iodoform gauze advocated by Dührssen should not be used on account of the accompanying kidney complication. For the same reason intra-uterine irrigation with antiseptics should not be employed from the diminished excretion by the kidneys of any that might be absorbed. Asepsis must be especially and rigidly observed in this operation. Despite the greatest care, over one-half of the operated cases are infected; the infection limiting itself in the most of the cases to the endometrium. Recovery follows in most of the cases rapidly.

The treatment of eclampsia in the Leipziger klinik is the following:

Narcotism only during the operation.

Forcible delivery.

In threatening œdema of the lungs, venesection, abstracting six hundred to eight hundred grammes of blood.—*University Medical Magazine*.

AIR IN THE VEINS IN CASES OF PLACENTA PRÆVIA.

Freudenberg (*Centralbl. f. Gynak.*, No. 20, 1894) dwells upon Henck's case of fatal air embolism in the course of a placenta prævia labor, recently reported in the *Zeitschrift für Geburtshilfe*, Vol. xxviii, 1894. Freudenberg lays great stress on Henck's observation, that when an extensive area of placenta was separated in his case, an unusually large quantity of liquor amnii was discovered. In Kramer's similar case there was excess of liquor amnii. Air enters the veins, Freudenberg believes, when the abundant fluid rushes out so rapidly that the uterus cannot steadily contract on the

speedily diminishing contents. Birnbaum always advised that in turning, in cases of placenta prævia, after the rupture of the membranes and the grasping of the foot, the operator's hand should be kept quiet in the vagina as a tampon, so as to prevent too rapid escape of the liquor amnii. Between the pains the operator's other hand should be kept on the abdomen, pressing the fundus, lest the uterine wall should, by its relaxation, leave a space in the uterine cavity, and thus allow air to enter the veins. Freudenberg always takes this precaution, and does not find that it in any way interferes with the manipulations required under the circumstances for delivery.—*British Medical Journal*.

THE USE OF THE CATHETER AFTER LABOR.

Recht (*Journ. de Médecine et de Chirurgie Practiquer*, May 25, 1894) shows that on the evidence of repeated observations micturition is almost always spontaneous. In 6,666 labors under Pinard's care in the course of the last four years, the catheter has been used only twenty times, and in the 1,920 labors last year only three times. Pinard objects very strongly to routine use of the catheter, which even in skilled hands often sets up cystitis. The practice in Paris lying-in hospitals is, however, very varied. At the school of midwives nearly every newly-delivered patient has the catheter passed. Maygrier, at the Pitié, delays the use of that instrument until twelve hours have elapsed after labor without the patient being able to pass water voluntarily. Bar allows a maximum of eighteen hours; Parak and Budin, twenty-four; Tarnier, thirty-six; Champetier de Ribes, forty-eight. Ribemont Dessaigues, at the Hôpital Beaujon, objects to the catheter as strongly as Pinard. Boissard finds that not only is there danger of cystitis when the catheter is passed after labor, but the patient is liable to lose the power of voluntary micturition for many days through nervousness.—*British Medical Journal*, June 9, 1894.

CENTRAL LESIONS AT BIRTH A CAUSE OF MELENA NEONATORUM.

Preuschen (*Centralblatt für Gynakologie*) contributes an outline of his researches relative to the relation of lesions of the central organs occurring during birth to melena neonatorum. In repeated post-mortem examinations he had observed erosions of the gastric mucous membrane; hæmorrhagic infarctions of the lungs, and at the same time tolerably extensive blood extravasations were present under the tentorium, on the cerebellum, crura cerebelli, ala cinerea or corpora quadrigemina, and once on the surface of the cerebral hemispheres. He was thus induced to make observations on rabbits. A solution of chromic acid was injected into portions of the brain to be examined, and thereby were

obtained lesions accompanied by melena. The infarctions in the lungs and stomach were not always associated. The gastric extravasations were sometimes the size of a pin's head, and, although generally scattered, were mostly in the cardiac region, fundus, and great curvature, but were seldom found in the antrum pylori. In other cases the extravasations followed the vessels. Occasionally there were large, isolated extravasations, 1 to 2 cm. long and broad. In other experiments, pieces of sponges and laminaria were placed in various parts of the brain, and paraffin was injected between the brain surface and calvarium. The same results as in the former experiments followed in the stomach and lungs.

The literature of melena gives ninety-two cases, with fifty-one deaths and forty-six autopsies. Leaving out the older cases, to the third decennium of this century, thirty-seven cases remain; of these only five give evidence of careful and complete examinations on the brain. In thirty-one the associated lesions were found.

CONCERNING AIR-EMBOLISM IN PLACENTA PRÆVIA.

Freudenberg, of Dresden (*Centralblatt für Gynäkologie*, No. 20, 1894). During the last six years three cases have been reported from the *Berliner Klinik* of sudden death in placenta prævia through the entrance of air in the veins. In these cases it has been known that the cause of death was the above named, and not through chloroform or from other causes. The last case described by Henck, the patient was seized with a violent pain as soon as the foot was drawn out of the vulva; she strained, projecting from the vulva a thick stream of blood-colored amniotic liquor. Freudenberg reasons that this manner of escape of the amniotic liquor is to be as far as possible prevented. The performance of version and the extraction of the foot is in no way rendered more difficult if the manipulation be carried out slowly and with care that the amniotic liquor is evacuated as evenly as possible. In this manner the uterus contracts regularly on the slowly-decreasing contents, and the fundus sinks continually deeper, while the external hand seeks, in the pause between the pains, to prevent, as far as possible, a relaxation of the uterine muscle and a rising of the uterus. The more amniotic liquor is present the more rigid must be our caution in the above manner to meet the possible danger. Also after the full extraction of the foot the operator or his assistant must control the uterus through energetic kneading, and prevent any relaxation of this organ, as in this alone lies the danger of air aspiration through the bared lumen of the veins.—*University Medical Magazine*.

GYNÆCOLOGY

IN CHARGE OF

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TUBERCULOSIS OF THE CERVIX UTERI.

Meyer (*Archiv für Gynakologie*, Bd. 45, Heft 3) reviews the literature and reports a case of tuberculosis of the cervix uteri. The views of the several observers who have written upon this subject differ widely. Rokitansky believed that tuberculosis of the cervix is always limited. Lebert believes it never occurs. Paulsen describes it as tubercular erosion of the cervical canal, and says it never invades the vaginal cervix. Kiwisch has reported a case of tubercular erosion of the vaginal cervix. Mosler found it in four out of forty-six post-mortems made upon women who had died of tuberculosis, and Kolb and Hegar gave similar results. All observers, except Friedlander, believe it occurs only secondarily. Friedlander, in making a post-mortem upon a woman dying of apoplexy, found a tubercular area the size of a cent on the vaginal cervix, abundantly covered with miliary tubercles, containing giant-cells, and surrounded by a small round-cell infiltration. Meyer reports the following case:

A woman, 30 years of age, III-para, family history negative. In 1878 she had pneumonia, and the next year perityphlitis. At six years of age a small nodule appeared on her right cheek, which, when it was removed, in 1879, was diagnosed as lupus, and had reached the size of a quarter of a dollar. It reappeared after four years, and was again removed in 1889. Since this time the patient has been healthy. Since 1886 menstruation had become progressively irregular and profuse, and in the interval between menstruations she had leucorrhœa.

Vaginal examination. Uterus small, normal in position, and movable. The cervix is somewhat enlarged, hard, and nodular. Adnexa normal. The cervix presents a livid erosion which bleeds easily. The uterine cavity measures three inches. Thinking the cervix the seat of beginning carcinoma, a portion of the cervical tissue was excised for microscopic examination. The result was negative, but, as hæmorrhage

continued, the cervix was amputated. Sections through the amputated cervix showed a circumscribed area of tuberculosis in the vaginal portion of the cervix, very near the cervical canal, composed of tubercles half the size of a pea surrounded by small round-cell infiltration. The tubercles contained many giant-cells with peripheral multiple nuclei, the remaining ground substance being indistinctly seen. The specimens were strained for tubercle bacilli, but none were found. That the condition was not a gumma is shown in the fact that there was no cell-proliferation of the blood-vessel intima, and the history and examination of the patient gave nothing characteristic of syphilis. That the giant-cells were not those found in granulation tissue is positive, since no granulation tissue was present. Meyer, although no tubercle bacilli were found, believes the condition undoubtedly tubercular, as the tissues described are only characteristic of this disease. That the disease was primary he is quite positive, since no other lesion could be found, and she had been free from lupus since 1889. Even if lupus were present, the relation between it and tuberculosis is not definitely known, the present general opinion not being in the affirmative. That it was not secondary to tuberculosis of the tubes and uterine mucous membrane is shown in that they were found to be normal. Menstruation for three months following operation was normal, it then again became irregular and profuse, and has continued thus for three months. Otherwise the patient is perfectly healthy, there being no vaginal discharge, and no possible manifestation of tuberculosis anywhere. That the hæmorrhage was not due to the lesion is shown in its recurrence after operation. Should this patient not present further symptoms, the case will represent an almost unknown primary tubercular lesion.—*University Medical Magazine.*

LIGATION OF UTERINE VESSELS IN THE TREATMENT OF UTERINE MYOMATA.

Rodygier (*Centralblatt für Gynakologie*, 1894, No. 13), who advocated in 1889 and 1890 the ligation of uterine and ovarian arteries in cases of uterine myomata, writes now: "I prefer to-day the extirpation of the tumor to the ligation of the uterine blood vessels, except in cases in which strong contraindications make the radical operation inexpedient." The following case has led him to this change of view:

A woman, æt. 32, came to the hospital on account of severe flooding which was caused by a uterine myoma (size not given). An operation was performed December 21st, 1891, when both the uterine and ovarian arteries and the smaller arteries of the broad ligaments were ligated. The recovery was speedy, and she left the hospital January 21st, 1892.

The flooding had ceased entirely. The patient presented herself again March 3rd, 1893, stating that the flooding had reappeared in October, 1892, and had increased in severity. The tumor was also much larger. The patient was very anæmic, and a radical operation had to be postponed until her condition would have improved. But she did not rally, and died March 8th, 1893. Post mortem not obtainable.—*American Journal of Obstetrics*.

PELVIC ABSCESS AND VAGINAL PUNCTURE.

An excellent article on "The Treatment of Pelvic Abscess by Vaginal Puncture and Drainage," by Dr. Clement Cleveland, appears in this issue, and furnishes much food for reflection. The author absolutely fixes his position, and anticipates all cavil, while he establishes his work, at the same time, on the true scientific basis, by the first rule which he has laid down for his own guidance in the matter of vaginal puncture *versus* extirpation. This he expresses as follows: "In regard to the condition of the patient—whether to puncture the supposed abscess without opening the abdomen, or to open the abdomen and then puncture, depends entirely upon my judgment of her ability safely to endure the laparotomy." The doctor here announces two very important things. First, he acknowledges that extirpation is the *ideal* operation, and, secondly, he insists upon the paramount right of the individual judgment of the operator as to which of the two procedures is indicated in each particular case. This latter dictum is so plainly true, and the question of personal equation must so necessarily enter into every operation, that it would seem a commonplace unworthy of mention; yet we constantly hear men insisting upon the adoption of the same method of treatment—out of several equally justifiable ones—in every case, quite ignoring the particular circumstances and conditions which determine the peculiar complexion of each case. The operator himself must be the judge of the significance of these, and it is his by right to decide as to the form of operation indicated. The list of interesting cases which he narrates seems fully to justify his decision in favor of vaginal puncture in each individual case.

In these days of *unscientific* abdominal surgery—we say it advisedly—it is most hopeful when men of prominence in this branch call attention to the importance of the patient's life as a factor in the choice of operative measures. This factor is apt, to some extent, to be overlooked just now by the *following* majority, who become dazzled too often by apparent brilliance and the charm of the word "radical." "*Rerum fames novarum*" is, undoubtedly, the motto of our day, when men who glory in their emancipation from old ideas quite fail to realize their slavery to the new.

There are but two points in Dr. Cleveland's paper to which exception may be justly taken, and these are, first, the too sweeping character he appears to give to his opposition to the breaking up of *firm* intestinal adhesions; secondly, the ignoring of what, in our opinion, is a very important contraindication, *cæteris paribus*, to vaginal puncture. Dr. Cleveland is very positive in regard to the first proposition noted. He says: "Experience has taught me profound respect for intestinal adhesions, and I never, now, attempt to remove them either with the fingers or scissors, when they are firm and extensive." We believe this is the only place in the whole paper where his statement is uncompromising in its scope, and is not regulated by scientific moderation. This is especially noteworthy, for the great merit of his article, as a whole, lies especially in this valuable and unusual quality.

Granted the patient's condition at the time of operating will warrant the extra time and increase of shock inflicted, we fail to see the objection to removal of all intestinal adhesions which may be removed by manipulation, even to the extent of moderate rupture of the gut itself. In these days of easy and efficient closure of intestinal tears, we do not believe the existence alone of firm and extensive adhesions to be any contraindication to the removal of the pus sac. Of course, there is danger of rupture of the sac itself to be considered—a far more dangerous matter than that of the intestine—and there are intestinal adhesions which would tempt only an idiot; but, generally speaking, we believe our efforts at separation of these adhesions should not stop at the limit quoted above.

Our second objection refers to the omission of the very important part these and other peritoneal adhesions not infrequently play, when firm, in abscess both of the tube and of the ovary. The tough walls of the sac, in these cases, are often rendered incapable of contracting after vaginal puncture, and the direction of the cavity is so distorted by these adhesions, especially when there exist attachments to the rectum or bladder or both, that proper drainage becomes impossible. Such a case as this will finally require a secondary laparotomy for the removal of the sac, with generally a much weakened condition of health, and greater danger of sepsis from the presence of the opening below. The intestinal adhesions, which were tried and abandoned, have also become more resisting, as a rule.—Editorial in *New York Journal of Gynecology and Obstetrics*, June, 1894.

SURGERY

IN CHARGE OF

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THE CAUSE AND PREVENTION OF NEURALGIA IN AMPUTATION STUMPS

Witzel (*Centralbl. f. Chir.*) holds that neuralgia after amputation is not caused, as is generally supposed, by the formation of neuromata at the ends of the divided nerves. He states that if such were the case it would be necessary to lay aside the amputating knife. The neuralgic pains, he believes, are due to adhesion of the neuromatous swelling, to the end of a bone. In order that its functions may be properly performed a nerve should move freely in its sheath. The structural elements which serve the special functions of a nerve are during life extremely delicate and almost fluid. The ordinary movements, therefore, of an adjacent joint would interfere with the structure and functions of the nerves of a limb if these nerves had no longer free range of movement in the direction of their long axes. In two cases of neuralgia after amputation in which Witzel had opportunities of dissecting the stumps he found thick neuromatous swellings at the ends of the divided nerves, which were bound down by tough cicatricial tissue to the ends of the bones. It is evident that during movements of the stump at the nearest joint the fixed nerves must be stretched, those on the flexion side during extension and those on the extension side during flexion. In neuralgia caused by confinement of a nerve in a mass of callus the pain, it is held, is due to the prevention of the nerve's movement and not to its compression. As a preventive treatment Witzel recommends that in every amputation as much attention should be paid to the nerves as to the large arteries, and that the former should be pulled away from the flaps and divided high up. Attention should be particularly directed to this precaution in cases of amputation at the ankle and shoulder.—*Epitome, British Medical Journal.*

ANATOMICAL AND SURGICAL RELATIONS OF INTRACRANIAL NEURECTOMY OF THE FIFTH NERVE AND REMOVAL OF THE GASSERIAN GANGLION.

Intracranial neurectomy of the fifth nerve and the removal or destruction of the Gasserian ganglion must now be given its place as one of the most beneficial as well as one of the most brilliant and difficult operations in surgery.

Rose and Hartley have given us very definite directions as to the mode of opening the skull and general surgical technique, but I have failed to find an exact statement by any one of the relative positions of the foramina, the ganglion, and arteries. It is with the hope of adding to our knowledge of these anatomical and surgical relations that, at the suggestion of Dr. W. W. Keen, I have lately made a careful study of the interior of twenty skulls taken, in the most part, from the collection in the Mütter Museum of the College of Physicians. My aim has been to establish by accurate measurements the distance between the foramina of exit of the second and third branches; and to establish definitely their relationship with the foramen spinosum, the carotid canal, and the depression or fossa for the ganglion. As is well known, this ganglion, a reddish-gray band of ganglionic matter slightly curved in its long axis so as to present a convexity forward and outward, rests upon a depression in the petrous portion of the temporal bone. From the convex antero-external border, three large bundles of nerve fibres arise.

The *first*, or ophthalmic division, is the smallest, and is purely sensory in function. It arises from the upper portion of the ganglion, enters the cavernous sinus, and passes forward in contact with the outer wall of the cavernous sinus, through the sphenoidal fissure into the orbit.

The *second*, or superior maxillary division, also a sensory nerve, passes out through the foramen rotundum and enters the orbit through the spheno-maxillary fissure.

The *third*, or inferior maxillary, the largest of the three divisions, consists of two portions; the larger, or sensory root, arising from the inferior angle of the ganglion, and the smaller, or motor root, passing beneath the ganglion. This latter accompanies the sensory root, and joins it after it emerges from the foramen ovale.

A small branch, the *recurrent*, passes into the cranium through the foramen spinosum along with the middle meningeal artery. This divides into two small branches, to be distributed to the dura mater and to the lining membrane of the mastoid cells.

As will be seen by this short account of the three divisions of the fifth nerve, it is impossible to make a definite section of the first division without doing great damage to the cavernous sinus, the third, fourth, and sixth nerves, and the carotid artery.

We must be content to cut the attachments and remove or destroy the ganglion, and with it the second and third divisions as they pass through the foramen rotundum and foramen ovale.

The middle meningeal artery, as it enters the cranium through the foramen spinosum, must frequently be wounded or torn through in our endeavors to reach the ganglion. For this reason it is often wiser to ligate and deliberately cut it than to run the risk of tearing it as it passes through the foramen; when by any chance this occurs, our only means of controlling the hemorrhage is by packing the foramen or the ligation of the external carotid artery below the origin of the internal maxillary artery.

In going over these skulls carefully, I have found such a great inequality in the measurements between the two sides that I have made a definite note of these variations, and give in my table the greatest, the least, and the mean measurements.

The distance between the centre of the foramen spinosum and the centre of the foramen ovale varies from 3 to 13 mm. The centre of the foramen ovale to the centre of the foramen rotundum varies from 9 to 18 mm. The centre of the foramen spinosum to the centre of the foramen rotundum varies from 11 to 24 mm. The centre of the foramen ovale is anterior to the centre of the foramen spinosum from 3 to 9 mm.

The centre of the foramen ovale is internal to the centre of the foramen spinosum from 3 to 9 mm. The centre of the foramen rotundum is anterior to the centre of the foramen spinosum from 13 to 20 mm. The centre of the foramen rotundum is internal to the centre of the foramen spinosum from 6 to 16 mm.

The distance from the centre of the foramen rotundum to the centre of the fossa for the Gasserian ganglion varies from 11 to 23 mm. The centre of the foramen ovale is distant from the centre of the fossa or groove for the ganglion from 3 to 13 mm. The width of the bridge of bone between the foramen ovale and the carotid canal varies from 1 to 13 mm.

The diameters of the foramina have been determined to be as follows: The *spinosum* varies from 1 to 4 mm. The *ovale* varies from 4 to 9 mm. The *rotundum* varies from 1 to 4 mm.

It will be seen by these measurements that the relationship between these different points is by no means constant, and in operating we must realize the fact. In the majority of instances the foramen spinosum with the middle meningeal artery is far enough away from the foramen ovale and the third branch of the nerve to enable us successfully to cut the latter without wounding the blood vessel. On the other hand, the spinosum may be so nearly in a line with the ovale that to reach it without

wounding the middle meningeal artery would be impossible. In some of the reported cases of the operation, where mention is made of alarming hæmorrhage, I am convinced this state of affairs existed.

For this reason, whenever the exposure of the third branch of the nerve is at all difficult, the surgeon should at once search for, ligate the artery, and cut it across, before attempting to find the nerve. This ligation of this artery is not very difficult, and will at once give much greater freedom of action.

The size and shape of the foramina vary in the different skulls; especially is this so with the ovale, which is at times perfectly round. The rotundum is most constant in its shape, and its variations are of little importance to the surgeon. The spinosum varies much, and in one instance there are two distinct foramina on the left side.

The character and sex of the skull seem to have little bearing upon the relative position of the foramina, with the exception that a broad, flat skull usually shows a greater distance between them, and it has been impossible to fix upon any rule by which these variations may be anticipated.—WILLIAM J. TAYLOR, M.D., in *Philadelphia Polyclinic*.

NOTE ON THE STERILIZATION OF CATGUT BY BOILING IN OLIVE OIL.

Catgut subjected to the ether-alcohol-bichloride process is unreliable as to its asepticity, and if kept long in bichloride becomes brittle and hard. Catgut in juniper oil is unreliable. Sterilization by boiling in alcohol is practised to some extent. Without considerable apparatus the method is difficult and expensive. Heat sterilization is more desirable and more efficient than chemical action, and, I think the best medium is olive oil. This is cheap, non-irritating, non-inflammable, and has little or no odor. To try this medium a series of experiments were made, having two objects in view:

- (1) As to the possibility of sterilizing catgut by heat.
- (2) The physical effect of high temperature upon it.

Three pieces of gut, each a yard long, were wound on glass slides immersed in olive oil in a two-ounce, salt-mouth, glass-stoppered bottle, sealed, and the whole placed in a water bath, and the vessel covered. The temperature was raised to boiling point (212° F.), and kept there for three hours. For some reason the oil became turbid and cloudy, but cleared up again after two or three days. This marred the appearance very much, and before it was discovered that it would clear up of itself some eight or ten samples were put through and then laid aside. After satisfying myself that the gut was not impaired, a sealed jar containing a single roll was sent to Professor Adolph Gehrmann, of the College of Physicians and Surgeons, Chicago.

These few tests, while not exhaustive, appear to justify the following conclusions :

Catgut can be rendered sterile by heating in oil to a temperature of 212° F. for three hours.

The method is reliable, cheap, and rapid.

The quality is not impaired, and gut so treated is more satisfactory as to strength and smoothness than if subjected to the ether-alcohol-bichloride process.

A temperature higher than 212° F. is not necessary for sterilizing, and is an injury to the gut.—B. L. Eastman, M.D., in *Annals of Surgery*.

[We have been sterilizing our catgut for some time by placing it in a metal box provided with a screw cap (Tiemann), and filling up with a ten per cent. solution of carbolic acid in almond oil. The cap being well screwed, the box is placed in an Arnold's sterilizer for two hours. The method of sterilizing in oil is quite as efficient and much simpler than any other yet suggested.—L.M.S.]

TUBERCULAR PERITONITIS.

A new method of treating tubercular peritonitis with exudation, by Nolen-Leiden (*N. Y. Polyclinic*). The favorable results which have been secured by laparotomy in this affection have raised the question as to which factor in the treatment the favorable issue is due. Considering each of these factors, it seemed that the contact of air with the peritoneal surface of the intestines must be the therapeutic agent. It, therefore, seemed advisable to try the effect of air injected into the peritoneal cavity, and, with the conviction that no harm could result, the author made the experiment in three cases. In all of these cases the results were satisfactory in that the ascites never returned. After puncture with a small trocar, a portion of the fluid is allowed to escape, and then air is forced in by the reversed action of an inspirating syringe, the air being sterilized by passage through sterilized cotton, and warmed by bubbling through warm water. The injector is stopped before distension of the abdomen has taken place, and the air withdrawn. The following day some tympanitis may be present, which is never a serious complication. The advantage of the procedure over that of laparotomy, and especially in children, will be readily apparent.—*St. Louis Medical and Surgical Journal*.

GENITO-URINARY AND RECTAL SURGERY

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GONORRHOEAL PERITONITIS.

Chaput (*Bulletins de la Soc. Anat. de Paris*) reports the case of a girl, aged 17, who had suffered from abdominal pains for a fortnight, and was admitted with all the symptoms of very acute peritonitis. Abdominal section was performed. A quantity of creamy yellowish pus was found in the pelvis ; the entire intestine was congested. On raising the right Fallopian tube, it was found to be dilated. Its fimbriæ were deeply injected. On pressing the tube with his fingers, Chaput caused a drop of creamy yellowish pus, of the same appearance as that in the pelvis, to issue from the ostium. The same condition was detected in the left tube. In order to protect the peritoneum from the septic stumps of the tubes when the appendages were removed, Chaput left the ends of the ligature silks hanging out of the abdominal wound, and a strip of iodoform gauze was pressed into Douglas's pouch. The patient in a few days had obstruction from paralysis of the intestine. An artificial anus was made, but afforded no relief, and the patient died. No mechanical obstruction could be found ; the violence of the peritonitis had caused paralysis of the intestine.—*Epitome, British Medical Journal.*

[It has not been demonstrated by any means that all cases of "pus tubes" are the result of gonorrhœa. In the case reported no history is mentioned of gonorrhœa, nor was any microscopical examination made of the pus. Why is it termed gonorrhœal peritonitis ?]

GONORRHOEAL ENDOMETRITIS.

Lantos (*Klinische Zeit und Streitfragen*) gives good advice as to the care with which uterine therapeutics must be used in cases of gonorrhœal infection. When the uterine cavity is clearly involved, the physician must

at once set to work to cure it lest the disease spread to the tubes. Lantos here, however, warns us not to be too enthusiastic. The hasty use of the curette, or even of carbolic crystals, solid chloride of zinc, and other powerful caustics has set up the gravest complications. Even more gentle intra-uterine medication is perilous when the appendages are already involved in the infectious inflammatory process. Hence should there be the least tenderness in either lateral fornix, the patient must be kept at rest for a few days, warm injections, etc., being administered. Whenever the condition of the genital tract shows that the endometrium may be safely treated, a Playfair's probe dipped into a 1 per cent. solution of sublimate should be introduced into the uterine cavity. A still better method is the washing out of the uterus with a 1 per cent. chloride of zinc solution by means of a double current catheter. When the cervical canal is made sufficiently wide, the uterus must be plugged with iodoform gauze.—*Epitome, British Medical Journal.*

[I drew attention to the necessity of local uterine treatment in gonorrhœa occurring in the female in a paper on "Uncured Gonorrhœa," but did not warn against too early interference.—E.E.K.]

A NEW BLOODLESS OPERATION FOR THE EXCISION OF HÆMORRHOIDS WITH HEALING BY FIRST INTENTION.

Dr. H. M. Bishop, of Los Angeles, in the *Therapeutic Gazette*, June 15th, 1894, describes a new bloodless operation for hæmorrhoids as follows: Put the patient in the lateral or dorsal decubitus, make the perinæum aseptic, and dilate the sphincter. Clamp the base of the hæmorrhoids with suitable forceps, in an even manner, leaving room on each side to put pieces of rubber tubing, 5 or 6 mm. in diameter, lumen, 1 mm., and ends sealed between the forceps and the healthy tissues. Secure the tubing by sutures passed through the base of the hæmorrhoids, and wound round the tubing. Remove the forceps and excise the tumor close to the tubing with flat scissors. The elastic pressure exerted by the rubber tubing prevents any hæmorrhage, and keeps the edges in perfect apposition. Pass strips of moist borated gauze into the rectum, leaving the ends protruding from the anus. The catgut sutures soften in due time, and permit the tubing to come away.

PEDIATRICS AND ORTHOPEDICS

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PERIODS OF ISOLATION FOR CONTAGIOUS DISEASES OF CHILDHOOD.

In the course of a report on this subject, Ollivier (*Gazette Médicale de Strasbourg*) makes the following rules:

For scarlatina, variola, varioloid, and diphtheria, the period of isolation, before the child is allowed to return to school, should be forty days counting from the first day of invasion.

For measles and varicella sixteen days will be sufficient.

For pertussis isolation should be prolonged to three weeks after complete cessation of the characteristic kinks.

For mumps, ten days after the disappearance of the local symptoms.

Nasal, buccal, and pharyngeal irrigations with antiseptic solutions should be employed, and soap bath and rubbing of the entire surface and scalp should be a necessary preparation before returning to school.—*American Journal of the Medical Sciences.*

SOME CASES OF DISEASES OF THE SKIN.

CASE 25. *Erythema Multiforme*. Marie E., thirteen years of age, presented herself at the Skin Dispensary of the University Hospital with an eruption consisting of shot to pea-sized, bright-red papules, for the most part discrete, but in a few places confluent, situated upon the extensor surfaces of the wrists and forearms and upon the backs of the hands. The eruption was attended by slight itching, and had appeared three days before the patient's visit to the Dispensary. A saturated solution of boracic acid was ordered to be applied several times a day for the relief of the mild pruritus; no internal treatment was considered neces-

sary. Upon the patient's return three days later the eruption was much paler, and within a week had completely disappeared. Eighteen months later the patient again presented herself with a new attack, which differed in no respect from the first one.

In most cases of multiform erythema active treatment is not necessary, since there are few or no subjective symptoms, and the eruption disappears spontaneously in one to three weeks.

The disease is one readily recognized, but might be mistaken by the inexperienced for papular eczema; it differs, however, from this affection by the bright-red color of the lesions, their larger size, and the absence of severe itching.

CASE 26. *Ringworm of the scalp.* E.C., a boy aged five, was brought to me for advice concerning a disease of the scalp characterized by the presence of numerous dime to dollar-sized circular patches partially devoid of hair, and covered with fine grayish scales. While the greater number of these patches were pale, a few of the larger ones were red and dotted here and there with small pustules. Upon close inspection, numerous short, broken, dry, lustreless hairs were to be seen which could be readily extracted with the forceps. Examination of these hairs with the microscope revealed large numbers of the spores characteristic of ringworm. The disease was of several months' duration, and was still spreading. The following ointment was directed to be rubbed into the diseased portions of the scalp once a day with considerable friction, the hair having previously been cut short:

R. B. Naphthol..... ʒi.
 Petrolati..... ʒvii.
 M.

In addition, the entire scalp was to be thoroughly washed every second day with hot water and a superfatted soap containing sulphur and salicylic acid. Under this treatment, which was most faithfully carried out by the child's attendants, improvement was immediate and continuous, and at the end of three months the hair was growing vigorously, and no new patches were to be found. As a precautionary measure, however, the treatment was directed to be continued for another month or six weeks.

Ringworm of the scalp is an unusually obstinate disease, and only yields to the most vigorous treatment intelligently pursued. Unless the applications are well rubbed in so that the hair follicles are penetrated, good results are not to be hoped for from any form of treatment.

CASE 27. *Eczema Rubrum.* J.B., a boy three years of age, was brought to me for the treatment of an eczema of the face and hands which had existed for a year or eighteen months. In the face the disease was

limited to the cheeks, which were bright red, oozing abundantly; the hands were less acutely inflamed, the skin being thick and covered with crusts. The itching was intense, occurring in paroxysms during which the little patient was uncontrollable, and scratched his face until it was raw and bleeding. Ointments many and various were prescribed from time to time, but these not only failed to improve the condition of the skin, but invariably increased the itching, so that this form of treatment had to be abandoned. The local treatment was finally limited to the use of lotions, and of these the familiar calamine lotion proved of great service during the moist stages of the disease. When the oozing had ceased and the skin had grown paler, a lotion containing five drops of the liquor carbonis detergens to the ounce of water was used with decided benefit, relieving the itching and lessening hyperæmia. After several months of patient and careful treatment, which was practically limited to the employment of the above-mentioned lotions, varied in strength according to circumstances, a cure was effected.

As a rule, ointments are far more serviceable in the treatment of cutaneous diseases than any other form of application; but, as the foregoing case illustrates, occasionally facts of every kind disagree. In such cases we must limit ourselves to the use of lotions or the gelatine preparations devised by Unna and others; and although these often succeed admirably, yet they can scarcely be regarded as entirely replacing greasy applications in effectiveness. Patients in whom this idiosyncrasy exists are apt to require long treatment and careful discrimination in the choice of remedies.—*M. B. Hartzell, M.D., in Archives of Pediatrics.*

SPORADIC CRETINISM CURED BY TREATMENT WITH THYROID GLAND.

In the *British Medical Journal*, June 2nd, 1894, two cases are reported, one by Telford Smith, and the other by Dr. Realton. The children were brothers, and were, in every respect, typical cretins. Improvement in every respect, physically and mentally, began at once when the children were given thyroid, at first as the raw gland, and later in the form of tuboids. Photographs of the children are shown, and the transformation from the deformed, stunted, thick-lipped, open-mouthed, and idiotic condition to a state in which the deformities have completely disappeared, and in which the countenance is bright and expressive of intelligence, is truly remarkable. So great is the change that it would be extremely difficult to recognize them as the same individuals. To illustrate the change produced physically, Dr. Realton reports in his case an increase in height of four inches in one year. In the two years preceding treatment he had grown but three-quarters of an inch.

PATHOLOGY

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ANATOMY AND PATHOLOGY OF CARBUNCLE.

Nosologically, carbuncle is one of the acute suppurative inflammations of connective tissue, and hence is generically related to osteomyelitis, parenchymatous abscess, acute abscess and furuncle, as well as other suppurative diseases of the skin. The essential unity of the group is shown when we consider that all have a local origin, all involve the same histologic structure, and all are due to the invasion of the same pus coccus; or at least one of the pyogenic cocci. The differences in clinical history, the divergence in pathologic process, and the various modes of termination which are found when we compare the several diseases of this generic group with each other, are determined by differences in the anatomic structure of the region or organ concerned. These differences are quite as marked in the skin of different regions of the body when they are compared with each other, as are those found in one organ when compared with other organs. These variations in histologic anatomy relate to thickness, density, toughness, elasticity, vascularity, the surrounding attachments, and the amount and mode of disposition of the adipose tissue.

It is these variations in histologic structure of the skin in different regions of the body, or the structural differences in the various strata of the skin in a given region, that determine whether in a given case of invasion by the pyogenic coccus we shall have a superficial pustulation, as impetigo; or a deeper and more extensive suppurative process, as furuncle; or a still more deeply seated and extensive one, as acute subcutaneous abscess, or carbuncle, as the case may be. When the coccus invades the mouth of the hair follicle, sebaceous gland, or sweat gland, and is arrested there, we have impetigo or one of its congeners. There is

little tension, no stasis, no obstruction to the outflow of fluids or pus, and no slough.

When the deepest part of the epithelial structures of the follicle, or the sebaceous or sweat gland is invaded, a true furuncle is the result. Here there is a degree of obstruction to the outflow of fluids and pus on account of the depth and partial closure of the passageway. Hence we have tension, stasis, liquification (pus), a limiting wall, and in the centre a cone-like slough, which consists of the remnants of the gland or follicle surrounded by as yet undigested connective tissue, especially fibres of the yellow elastic tissue.

But when the pus coccus passes beyond the epithelial layer of the skin into the cutis vera, the result is either an acute abscess, with its circumscribed cavity filled with digested connective tissue and inflammatory products, or, on the other hand, a carbuncle with its dense infiltrated mass of undigested connective tissue, without any circumscribed cavity. Whether it be an abscess or a carbuncle will depend on the histologic structure of the skin of the particular region invaded. The region of predilection of carbuncle is "the dense and fibrous integuments over the posterior median line of the body." The skin of this region is characterized by :

- (1) Its extreme thickness, especially the relative thickness of the cutis vera.

- (2) The aponeurotic-like density of the papillary layer, and its having few and small openings.

- (3) The more direct connection of the subcutaneous tissue with the reticular part of the true skin, as one continuous structure.

- (4) The number and size of the polygonal spaces found in the subcutaneous and reticular strata, caused by the diverging and interlacing bundles of dense and not easily dissolved fibrous tissue which make up the framework of these strata. These polygonal spaces are chiefly occupied by adipose tissue constituting the *panculus adiposus*, and a delicate network of fine easily digested connective tissue.

- (5) The presence of Warren's fat columns, extending from the adipose tissue below to the base of the follicles of the lanugo hairs above, with their horizontal branches.

- (6) The dense, tendon-like, cone-shaped fibrous bundles which extend from the base of the adipose columns obliquely to be inserted into the muscular fascia beneath.

The pus coccus having passed down and invaded these tissues, a focus of inflammation is begun, and we have all the factors and conditions necessary for the production of a typical carbuncle. The delicate network of areolar adipose tissue succumbs readily and liquefies, and, as ten-

sion increases, pus is forced to the surface through the slender adipose columns into the hair follicles as the only means of escape. Thus we have the numerous pus points, and eventually the cribriform condition of the surface of the skin so characteristic of carbuncle. As tension increases, the inflammation is forced to extend laterally further and further from the original focus through the polygonal spaces and channels occupied by the rapidly dissolving delicate connective tissue and fat. Thus we have the characteristic peripheral extension and the broad, flat, indurated mass pressed between the still resisting dense papillary layer above and the muscular fascia beneath, which are still firmly bound together by the tendon-like cones of fibrous tissue. If now an incision be made into this mass, there would be seen the numerous small pus points and channels, but no proper pus cavity; both of which conditions are well-recognized features of carbuncle. The process continues until the skin over the original focus becomes necrotic and sloughs away, thus reducing the tension and peripheral pressure, and we have the first step towards the natural limitation of the disease. But if this infiltration and induration have already extended so far as not to be influenced by this diminution of tension, it will continue to spread indefinitely, or until the sloughing process following in its wake has gained on it sufficiently to entirely arrest the peripheral tension. After all the long-resisting, dense, fibrous parts described above, which began to die with the skin, have yielded and sloughed piecemeal, we have the crater-like cavity co-extensive with the indurated mass.

It is said that carbuncle may occur on any part of the body, but this is not correct of true typical carbuncle conforming to a fixed definition. We cannot have a typical carbuncle without continued surgical tension in inflamed tissues, one part of which resists the digestion or liquefying process of suppuration longer than other parts.

Many cutaneous inflammations are loosely called carbuncles, when they are simply abscesses. But as the characteristic features of the carbuncular skin are only typical in certain regions of the body, and are found more or less perfectly or imperfectly in other regions, it will often happen that a suppurative inflammation of the skin and subcutaneous tissue cannot be definitely classed either as a carbuncle, an abscess, or a furuncle; or that the characteristics of one predominate, while those of the others are present in some degree.

CHLORIDE OF SODIUM IN PNEUMONIA.

The quantity of chloride of sodium excreted in the urine by a healthy adult is about one hundred and fifty-four grains in twenty-four hours. It

is derived from the blood, and it follows that if the salt is deficient in this fluid it will be likewise diminished in the urine. Now, it is found that in pneumonic fever the blood is deficient in these salts, and it is generally believed that this is attributable to the exudative process going on in the lungs. Beale, who studied this subject exhaustively, came to the following conclusion: (1) Chloride of sodium is totally absent from the urine of pneumonic patients at the period of complete hepatization; (2) it reappears during resolution; (3) it exists in the blood in the greatest abundance when it appears most largely in the urine, and *vice versa*; (4) it exists in large quantities in the pneumonic sputa; (5) there is reason to believe that it is determined toward the inflamed lung, and is reabsorbed on the resolution of the process.

Chloride of sodium appears scantily in or is absent from the urine in other diseases besides the one under consideration, *e.g.*, bronchitis, pleurisy, phthisis, cholera, rheumatism, typhus fever, cerebral abscess, etc.—*The Journal of the American Medical Association*.

ON THE FREQUENCY AND IMPORTANCE OF OTITIS MEDIA IN SICK CHILDREN.

Dr. Rasch, of Copenhagen, has examined the middle ear in 61 post-mortem examinations of children up to two years of age. The middle ear was normal only in 5 cases (8 per cent.); in 46 cases (75.5 per cent.) suppurative otitis media was found in either one or both ears, and in 8 cases (14.5 per cent.) simple catarrhal otitis media was present. Otitis media was observed in nearly all the children who had died of broncho-pneumonia (43 cases), but had not been diagnosed during life, on account of the membrana tympani being rarely perforated, although pus was found in 77 per cent. of these cases. Several of the children had exhibited brain symptoms, sometimes so marked that meningitis was diagnosed during life, while the post-mortem examination revealed no affection of the brain or its membranes; the author therefore calls attention to this source of error in diagnosis in cases of broncho-pneumonia. In 43 cases the exudate was examined more minutely, and in 33 of these pneumococci were present. Whenever pneumococci were found, the tympanic membrane was without perforation. Perforation of the membrane was, on the whole, a very rare occurrence, appearing only in 4 of the 61 cases examined. The author is inclined to believe that broncho-pneumonia in infants plays a rôle in the etiology of deaf-mutism, the otitis media extending to the internal ear.—*Hospitals-Tidende*, Nos. 18-20, 1893.

Editorials.

REPRESENTATION IN THE NEXT COUNCIL.

THE complexion of the next Medical Council of Ontario will certainly be very materially altered, especially as far as the territorial representatives are concerned. At present there are twelve of these. Four will not be candidates for re-election, viz., Drs. Day, Miller, Fulton, and Orr. As Drs. Bergin and Rogers are both in the new division, No. 17, one must of necessity stay at home. There is thus no possibility of the return of more than seven. If seven were re-elected, there would be among the territorial representatives seven old and ten new members. It is not likely, however, that more than five old members will be successful (there may be less). We may have, therefore, twelve or thirteen new and four or five old territorial representatives.

It is difficult to say anything definite as to partyism in the new council. The *happy family* business will be, to a large extent, disturbed. Probably this will do no harm. Some active and aggressive "Defence" men will be there. They may be a minority even of the territorial representatives, but they are certain to exercise some influence, we think, in the right direction. A number of the new members will have no strong party predilections, and are likely to avoid extremes on either side. We are glad to know that many of these are exceptionally good men, who may be expected to do credit to themselves and their constituents.

We have no precise information respecting the collegiate representatives, but understand the changes will not be many. It will be a matter of pretty general regret that Sir James Grant is not likely to return. The University of Toronto is quite satisfied, so far as we know, with its representative, Dr. Britton, and will probably send him back. Dr. Thorburn is likely to be re-elected as the representative of the Toronto School of Medicine. After his entrance to the council he went rapidly to the front, and is now recognized as one of the most influential members. So far as we know, the other "school men" have satisfied their constituents, and under such circumstances are likely to be re-elected.

THE DEFENCE ASSOCIATION AND THE UNIVERSITIES.

WE publish in this issue a letter from Dr. Sangster in reply to certain editorials, or portions of editorials, which appeared in *THE CANADIAN PRACTITIONER* of last month. In making our comments from time to time, we have endeavored to be just to all parties who have taken part in the Medical Council war of the last three years. We certainly do not desire to be considered in any sense the champion of the universities, if they oppose in any way the general interests of the medical profession of Ontario. Surely all will admit that a conflict between these corporations and the professional public is not likely to accomplish any good purpose. If the universities were actuated by purely selfish motives, they would never have encouraged the formation of a Medical Council. Free trade in medical education, without the interference of any central examining body, generally suits the ideas of weak, cheap, and selfish universities in all parts of the world.

We have no desire to offend the feelings of Dr. Sangster or any other prominent member of the Medical Defence Association. *THE CANADIAN PRACTITIONER* was the first independent medical journal that recognized the respectability and power of that association, and expressed its views in that direction on many different occasions, especially after it appeared that the council, or certain of its members, were inclined to *jockey* the association out of existence by a little parliamentary sharp practice. We have endeavored, however, to do justice to all parties, and, in pursuance of such a course, have pleasure in publishing Dr. Sangster's letter in full, although we cannot see that it contains anything like a reasonable answer to our main contention, that our universities did not act in a spirit of "pure selfishness" in assisting to organize a body which so seriously curtails their powers and money-making facilities.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

WE have much pleasure in again announcing that the next meeting of the American Association of Obstetricians and Gynæcologists will be held in Toronto, Wednesday, Thursday, and Friday, September 19, 20, and 21. The provisional programme will be found in another portion of this issue. This society was organized in 1888 at a meeting held in Buffalo, and since that time annual meetings have been held in various cities in the United States. As the name will indicate, the society

is American, but it is American in the broadest sense of the word. As Past-President Montgomery once expressed it: "The association is not limited to the United States, but only by the boundaries of the western continent."

In response to cordial invitations certain Canadian physicians have become members, and have received the kindest sort of treatment from their brethren of the United States. A Canadian occupied the presidential chair in 1892, and another has been an active member of the council for three years. The Canadian members are: Dr. Praeger, Nanaimo, B.C.; Dr. Howitt, Guelph; Dr. Griffin, Hamilton; Drs. Nevitt, Ross, Cameron, Machell, and Wright, Toronto. There are in the association altogether ninety-six ordinary fellows, two corresponding fellows, and twenty-eight honorary fellows. The ordinary fellows are all residents of North America, and an examination of the programme will give some idea of their distribution. The Atlantic coast, the Pacific coast, Canada, the Northern, Midland, and Southern States, each and all, do their share in furnishing members. It is expected that in the near future some physicians of South America will be elected as fellows.

We are instructed by the officers of the association to extend a cordial invitation to all physicians to attend any or all of the sessions. It is expected that the meetings will be held in the Normal School building, in St. James' Square. The programme is an excellent one. It looks as if our friends from the United States were making an extra effort to make the Toronto meeting an exceedingly interesting one. The pronounced ability of those who have signified their intention to come over and take an active part in the proceedings will insure success in this direction. The local committee is making the necessary arrangements, and asks for the active co-operation of physicians both inside and outside Toronto.

THE FINANCES OF THE ONTARIO MEDICAL COUNCIL.

MATTERS of finance in connection with the Medical Council have been so thoroughly discussed in both the lay and medical press that we considered it unnecessary in *THE PRACTITIONER* to devote much space to the subject at the present time. However, as no one expects to get an impartial opinion from a subsidized journal, we consider it a duty which we owe to our readers to make some reference to these financial questions.

It is an exceedingly unfortunate thing for the council that certain petty irregularities were allowed to continue for some time. Overcharges for travelling allowances, Pullman car luxuries, boarding by the

day, etc., do not reflect any special credit on those concerned in such questionable transactions. These are, of course, small matters, but they are none the less indefensible on that account. As a matter of fact, they very seriously handicapped the council in its contest with the Defence Association. In the same connection, we regret that certain men should have been blamed for pernicious customs which they did not inaugurate.

The Legislative Committee spent over \$900 as expenses incurred in connection with the enactment of certain amendments to the Medical Act by the Ontario Legislature. We consider such expenses were legitimate up to a certain point; but believe, at the same time, they were excessive. Such expenditure was especially undesirable when the whole question became simply a fight between the council and the Defence Association.

A great deal has been said about so-called speculation in real estate. The electorate has a perfect right to discuss the purchase of certain property in Toronto and the erection of a building, but such offensive terms as "gambling," "reckless wastefulness," "clandestine methods," and many others of the same sort, are surely unnecessary. We have always thought that the council had a right to purchase a lot and erect a building. A piece of land was bought in a very good situation, and a handsome, substantial building was erected. It was deemed expedient and economic to have a building which would yield a revenue. We believe that every step in connection with the whole business was taken only after careful deliberation, and the work in connection with the building was carefully supervised. If, as some contend, it can be sold with advantage, and that a new building can be erected on some other site that will answer all the purposes of the council and cost less money, the matter is worthy of careful consideration. Such a *deal* might be almost as much like "real estate speculation" as the purchase of the present site and the erection of the building; but we will certainly not object to the scheme for any reason of that sort. We think it well to consider this important subject as still *sub judice*. At the same time, we hope that any new scheme that may be placed in definite shape will receive careful consideration by the new council.

MEDICAL COUNCIL EXAMINATIONS.

THE examinations of the Ontario Medical Council during recent years have generally been satisfactory. The examiners have been selected with due deliberation, and generally on their merits. The large proportion of rejected candidates has shown sufficient rigidity. Occasionally an injustice is done, but always unwittingly, we believe. When the results

of the last examination, held in April, were announced, the name of Dr. Hugh A. Johnston did not appear on the list, although he had previously passed his final (or, more correctly, fourth year) examination at the University of Toronto with great credit to himself, as shown by the fact that he was awarded a silver medal. His success at this examination was not exceptional. He had worked faithfully for four years, and had passed all his previous examinations with high honors.

It is sometimes considered quite a joke when a medallist of one of our universities is rejected by the council. It is, however, a very serious matter for the unfortunate victim. It certainly was so in this case, because, as a consequence, a very worthy and industrious young man probably lost a very valuable appointment in the Toronto General Hospital.

Dr. Johnston applied to the council for a reconsideration of his case. His request was granted, and, after an investigation of some sort (we know nothing about the particulars), he received his license to practise. The council thus acknowledged that a mistake had been made. This was, perhaps, not a very dignified action, but it was a just one.

The question naturally arises, Is it not possible to avoid such an unfortunate accident? There is, of course, a certain amount of chance with a man of average standing; but a man standing high in honors for four years, and accustomed to examinations, should always be sure of a simple pass. We think, if there had been a meeting of the examiners, according to the ordinary custom that prevails in most examining bodies, that the mistake would have been discovered before the results were made public. We believe there should always be a meeting; and, in addition, we think the decision of the Board of Examiners after such meeting should be *final*.

Correspondence.

"THE OLDEST PHYSICIAN."

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—Dr. Case, of Hamilton, may be the oldest physician in Ontario. There is, however, an older than he on the Ontario Medical Register. I refer to Dr. William A. R. Gilmour, of Three Rivers, P.Q., a provincial licentiate of 1830. Dr. John Barnhart, of Owen Sound, is third (1834).

Yours truly,

JOHN W. McCULLOUGH,

Alliston, July 23rd, 1894.

LODGE PRACTICE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—In your journal of July, Dr. Bowerman has the temerity to defend that modern outrage on the medical profession—to wit : lodge doctoring. In his reply to my communication he has wandered far from the points of issue in the case. He tells us that, in two Ontario societies, some 51,000 men have their doctoring done for a mere trifle.

Does he call that philanthropy? Shall the medical profession be the slave of the lodges because a number of them have broad-minded and practical business men in their ranks?

How can any physician expect to afford to attend one hundred or more men for \$1 to \$1.50 per member per year for a number of years? Why, a great many of those persons will require attendance daily for weeks and months at a time, and, as the members of the lodges become older, as they must, this attendance will become greater.

Dr. Bowerman loses sight of the fact that the lodge members intend to remain as such as long as they live, and, as they advance in years, the medical attendance will also increase. The doctor forgets that sound business principles should be applied in contracting to attend these lodges. And, at such low rates, no satisfaction can be given to patients. It may

be all very well for the first five or ten years, but, after that, these lodge doctors will begin to find out their mistakes in accepting such contracts. Dr. Bowerman has failed to answer a single argument in my communication of June last.

These lodge doctors need not suppose that they are the only philanthropists in the medical profession. Why, sir, people who require our consideration are outside the ranks of the members of lodges.

Away with such a silly institution as lodge practice !

F. T. BIBBY.

Port Hope, July 31st, 1894.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—With your kind permission, I shall briefly reply to Dr. A. G. Bowerman on "Lodge Practice." In the first place, I shall remark that Dr. Bowerman's letter is a rushing torrent of words without argument on the real question.

Fraternity is a grand thing, but it should not all be adverse to the doctor. The usual fees paid, say, of one dollar a member for attendance, and one dollar for examination when the applicant enters the society, is altogether too low, and Dr. Bowerman, I fear, would not like to defend such fees over his own signature.

Then the medical attendant is elected to attend a certain number of men for a year, and, as a consequence, to a great extent loses his freedom, his method of treatment, and the number of visits he ought to make. One of the great points in a successful lodge doctor is to please the members.

Next, the doctor is under the watch of that wonderful organization, known in the lodges as the "Sick Committee." This committee often take it upon themselves to wig the doctor soundly in the lodge for not having visited the patient often enough, and for other things that may not just suit the minds of this important portion of the lodge.

But we have consultations all deranged. A certain person belongs to several societies, and gets all the doctors around him in consultation ; but, worse than that, goes to the several lodge doctors alternately.

Again, I have known cases like this. A man is in three lodges. They supply doctor and medicine. He has a bad cold and goes to doctor No. 1. The bottle he gets he gives to his wife. He then goes to doctor No. 2 and gets a bottle, which he gives to his son, also down with the gripe ; and then he goes to doctor No. 3 and gets a bottle, which he takes himself. Will Dr. Bowerman defend this ?

Now we are getting juvenile courts and lodges started. In time everybody will be in lodges, and all the practice will be lodge work. The

father in the Sons of Canada, the mother in the Daughters of England, the daughter in the Sisters of Temperance, and the son in the Juvenile Court of Foresters have all their medical attendant. The whole family is thus supplied with four physicians for four dollars a year! I remember one family where there were three cases of sickness, all attended by different medical men, and at the same time. Three doctors running around the same house in the same days. What a glorious opportunity for misunderstandings!

Then we have the annual canvass for the election of lodge doctor. There are two doctors in the lodge, and each has his friends. There is an election, and Dr. A. gets there. The other doctor and his friends are out, of course. During the year every opportunity is watched for to discredit Dr. A., and at the end of the year he is voted out. After the vote is over one of the "brethren," who was most eager to defeat Dr. A., comes up to him and hypocritically regrets that he did not get it again.

This, and much more of such dirty mess, is what Dr. Bowerman is trying to defend. It is really painful to behold a medical man taking such a stand. We sincerely hope that, though many may do some lodge practice, Dr. Bowerman will be the only one found defending it.

M.A., M.D.

DR. SANGSTER ON COUNCIL MATTERS.

To the Editor of THE CANADIAN PRACTITIONER :

SIR,—I am rather surprised and somewhat hurt at the tone and tenor of certain editorials in your last issue. I esteem THE PRACTITIONER very highly, and always read it with profit and pleasure. Our association is indebted to you for fair and honest criticism in the past, and for some words of approval; and your occasional references to my own efforts have always heretofore been just, and, at times, even generous. You have managed to avoid taking sides with either the Council or the Defence Association, and if you have become a little restive, now and then, when the privileges and assumptions of the educational bodies were rudely handled, or the so-called "vested rights" of the universities questioned, it excited no surprise and called for no comment. It would, indeed, be passing strange if, with your alliances and life-long associations, you could see eye to eye on certain subjects with those of us who look at such things from a purely professional standpoint.

I do not purpose now entering on any discussion in support of our claim for professional autonomy. We can agree to leave that question to the future. Possibly, in the fullness of time, we shall have to ask the

Ontario Government for a Commission to hear arguments and to take evidence on oath respecting the matters at issue between us and the universities. We have no doubt whatever of our ability to establish before such a Commission—both by incontrovertible argument and by the mouth of living witnesses—that our contentions are correct, our cause just, and our claim irresistible. Meanwhile, you express surprise that we are not content with what we have secured, since, in view of the recent amendments to the Act, the appointees in the Council will be “expected simply to consider matters pertaining to curriculum and the examinations.” Allow me to ask you, sir, whether you can perceive any present indication that the appointees in the Council design to accept the situation—any intention on their part to thus limit their functions until they are forced to do so by special legislative enactment. The Printing Committee—which threw away \$600 of the money the profession, in the specious name of a contract with one of the members of the Council—is composed of a homœopath, two appointees, and two elected men, one of whom claims that he opposed the report. And did not nearly every appointee in the Council further, by voice and vote, this corrupt act? Is not the chairman of the Finance Committee the representative of a defunct educational body? Is there a single committee of the Council that does not boast the presence of one or more appointees? Does this look like limiting their functions to matters of curriculum? And are you any longer surprised that we are not satisfied?

You quote a short passage from one of my letters, and profess to find in it all sorts of abominations—“bitter denunciation,” “attacks on private character,” and efforts to turn love into “bitter hatred.” How near, sometimes, is sentiment to bathos! Such cheap appeals to the clanship of medical alumni for opposition, right or wrong, seem out of place in the editorial columns of a reputable and ably-conducted journal like *THE PRACTITIONER*, and might be fitly left to your \$600 contemporary. The passage quoted contains within itself an ample refutation of the charges you make. I may, however, remind you that the utterly selfish motives on the part of the medical schools, which prompted the creation of the Medical Council and the institution of the Medical Act, were fully exposed in the address delivered by the president of the Council in 1892. That address was published with the approbation of the university appointees, and if I mistake not, received the indorsement and the encomiums of *THE PRACTITIONER*. Its explanations of the how and the why the Acts of 1866 and 1869 were procured are substantially correct, and the “motives” are now a matter of history. You claim that in adverting to the acknowledged selfishness of the educational bodies I am “attacking members of our profession whom we respect.” Does not this border on the ridiculous?

Such a contention, if sustained, would put an end to the criticisms of all public bodies. I have always felt and freely expressed the highest respect and admiration of the personal qualities and professional eminence of the two gentlemen whom you specify by name, and a brief reference to them at the end of my letter to the *Mail* on the 25th ult. may be taken as evidence of that fact. But does my recognition of their private and social excellence and their professional standing preclude me from adversely criticizing any or all of the public bodies with which they may chance to have been at one time or another connected? Are we debarred from freely animadverting upon, or even from severely censuring, the public acts, the official jobbery, and the extravagance of the Medical Council because we believe or know that some or all of its members are personally pure, and entitled to admiration and respect? If you can show that, contrary to the generally received opinion in the profession, and the actual knowledge of those of us who were at the time in the *mêlée*, the schools were not actuated by purely selfish considerations in procuring the Medical Acts of 1866 and 1869, by all means do so, but let us not import into the discussion of the question hysterical appeals to a spurious *esprit de corps* of university graduates.

I am not preaching a gospel of hatred, nor am I trying, nor have I ever tried, "to turn the love which many of our medical graduates feel for their *alma mater* into bitter hatred." I am amazed that you could permit your pen to formulate against me a charge so unjust and so uncalled for. I am myself not only a graduate, but an ex-professor of Victoria University, and I entertain for her as warm a love, and as filial a respect, and as true a loyalty as any graduate in this province feels for his *alma mater*. Yet I have not thought, and I do not think, that affection for, and fidelity to, my university involves the necessity of, or indeed is compatible with, a servile acceptance of her acts and contentions, right or wrong. I think it impolitic and undignified for any university to continue to meddle with the government of the medical profession in this province, in the face of the clear indication that such interference is, at length, almost universally regarded as unjust and offensive. I think that in continuing to appoint a representative to the Council—even for curriculum purposes alone—after she has ceased to teach and to grant degrees in medicine, my *alma mater* is clearly and distinctly placing herself in the wrong; that even though the presence of her appointee in the Council may have the sanction of law, it is, nevertheless, an unwarrantable intrusion, calculated to arouse feelings of animosity, and to hurt her prestige. If I still had a seat in her senate, I would from it emphatically proclaim my opinion to that effect. Not being thus favored, I frankly, yet lovingly, express to her, through the public press, my con-

viction that her position, in this matter, is no longer tenable, and that prudence should dictate to her the wisdom of withdrawing therefrom while she can do so voluntarily and with dignity. You *must* know that there are hundreds of medical graduates in the province who feel on this subject as I do, and whose love and veneration for their respective universities is, nevertheless, not a whit inferior to your own. Are our tender solicitude for our *alma mater's* good repute and our faithful vigilance in warning her of peril an evidence of bitter hatred, or calculated to beget bitter hatred? Do they not rather evince a higher fidelity and a warmer love than the indifference that cares not to guard her from wrongdoing, or the interested selfishness which would urge her to continue in a course certain, in the long run, not only to alienate her medical alumni, but to arouse the angry opposition of the whole body of medical men in the province? I should be sorry to repay the knowledge I drew from her maternal paps by a treachery so heinous.

While reflecting on the ex-president of the Council for his strained attempt to defend all the actions of the Council, right or wrong, you think my treatment of him is neither just nor courteous. Permit me to say that when Dr. Campbell, even from the ex-president's chair, attempted to interfere in an election with which he had no business to meddle, and ventured to insult the whole Defence Association—which, I may remind you, embraces the major half of the profession—by insolently and without cause ascribing to its directorate “the tactics of the demagogue and the language of Billingsgate,” he placed himself outside the pale of courtesy. Had the chief officer of the Council, in the preparation of his address, confined himself to facts and couched his strictures in the language of truth and honest intent, no one would have had ground of complaint, or would have cared to remember that it was delivered by a homœopath lifted by circumstances for the moment out of his native obscurity. The ex-president's remarkable production is the result of a species of literary evolution. It made its appearance in its primitive form as an address delivered to the Canadian Institute of Homœopathy, and published in the second number of the Council's subsidized journal. Its second element was a letter published a few months ago in the same periodical. Emboldened by our forbearance, Dr. Campbell had the hardihood to rehash these two concoctions, with sundry new “moral attenuations,” into an electioneering pamphlet for the service of the territorial element of the Council. In both his former literary efforts, he made himself ready for a spanking, and was suffered to escape. This time he has ventured to present himself before us entirely *sans-culotte*, and he is likely to receive the cobbing he so richly merits.

JOHN H. SANGSTER.

Port Perry, July 31st, 1894.

Book Reviews.

THE MEDICAL PROFESSION IN UPPER CANADA, 1783-1850. An historical narrative, with original documents relating to the profession, including some brief biographies. By Wm. Canniff, M.D., M.R.C.S. Eng., author of "The Principles of Surgery," "Settlement of Upper Canada," etc. Toronto : William Briggs, 1894.

It is fairly well known to the profession in Toronto that Dr. Canniff was for many years engaged in collecting material for this very interesting book. Some of the records which he has collected would probably have been entirely lost if it had not been for his untiring efforts. In giving us a history of our profession the author has certainly furnished a valuable contribution to Canadian history. He has told us how much the medical profession of Upper Canada has done in the way of building up this country. He has included a number of brief biographies of distinguished physicians of this province. The profession of Ontario ought to feel very grateful to the able and worthy author, Dr. Canniff, who has given us a work of such great value. As to the publisher, William Briggs, we have only to say that he has done his share of the work in an admirable manner.

PRACTICAL URINALYSIS AND URINARY DIAGNOSIS. A manual for the use of practitioners and students, with numerous illustrations, including colored photo-engravings. By Charles W. Purdy, M.D., of Chicago, author of "Bright's Disease and Allied Affections of the Kidneys," "Diabetes : Its Causes, Symptoms, and Treatment," etc.

Part I. is devoted to the general subject of "Analysis of Urine," treating in detail of urine composition, organic and inorganic constituents of normal and abnormal urine, physical characteristics, volumetric, gravimetric, centrifugal, and all other methods of analysis. The various processes and methods of detection, determination, calculation, etc., of all pathological manifestations and substances in the urine, with their causes and clinical significance, including the urine as a toxic agent, all forms of urinary sediments, casts, etc., are discussed.

Part II. is devoted to "Urinary Diagnosis," and discusses fully all forms of urinary and renal diseases, including anatomical considerations, regional relations of the kidneys, ureters, bladder, and the renal pelvis, also their physical examination, etc., clinical diagnosis of urinary and renal diseases. The diagnostic value of the urine in acute infectious diseases is clearly and scientifically set forth, the author giving special prominence to the relations of the chemistry of the urine to physiological processes and pathological facts.

In the Appendix is presented the highly important subject of "Examination of Urine for Life Insurance."

It has been the special aim of the author to furnish the student, physician, and surgeon, in one convenient volume, the essential features of our present knowledge of the urine and urinary diagnosis, thoroughly up to date, and in a systematic, concise, and practical form.

The well-known house of The F. A. Davis Company, 1914 and 1916 Cherry street, Philadelphia, will issue the work in September, 1894. Price, \$2.50.

The following book and pamphlets have been received :

NEPHRITIS IN ITS SURGICAL ASPECTS. By Edward L. Keyes, New York. Reprinted from *The American Journal of the Medical Sciences*.

CONGENITAL OCCLUSION OF THE POSTERIOR NARES. By William Scheppegrell, A.M., M.D., New Orleans. Reprinted from *Annals of Ophthalmology and Otology*.

INTESTINAL APPROXIMATION, PATHOLOGICAL HISTOLOGY OF REUNION, AND STATISTICAL ANALYSIS. By Dr. J. B. Murphy, Chicago. Reprinted from *The Chicago Clinical Review*.

A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY, AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D. In three volumes. Published by D. Appleton & Co., New York. Toronto agency, Geo. N. Morany, 63 Yonge street. Subscription only. Volume III., "Dermatology."

Medical Items.

THE CHAIR OF PATHOLOGY AT GLASGOW.—Dr. Joseph Coats has been appointed Professor of Pathology in Glasgow University.

DR. J. S. LYNCH, one of the oldest and most highly respected physicians of Winnipeg, died in the general hospital of that city, July 23rd.

DR. FELIX SEMON, Physician for Diseases of the Throat, St. Thomas' Hospital, has had the title of "Professor" conferred on him by the Prussian Government.

THE BOYLSTON PRIZE for 1894 has been awarded by the University of Harvard to Dr. Norman Walker, of Edinburgh, for an essay on the "Histological Varieties of Cancer of the Skin."

THE MEDICAL GOLDEN RULE.—"I feel constrained for once to give you a golden rule. It is never to speak ill of any of your fraternity, whatever you may think. You will do yourself no good, and it will only be thought that you are jealous."—*Dr. Chesterfield's Letters to his Son.*

T. T. METCALF, M.D., of Independence, Ky., says: "I have given Sanmetto a thorough trial in chronic cystitis with prostatic enlargement, and find it superior to all other remedies. It not only relaxes the spasmodic condition, but has a soothing effect on the mucous membrane of the urethra and bladder. All my patients speak more favorably of Sanmetto than any other remedy they have ever used."

SIR JOSEPH LISTER.—The Council of the Society of Arts has, with the approval and sanction of the President, His Royal Highness the Prince of Wales, awarded the Albert Medal to Sir Joseph Lister "for the discovery and establishment of the antiseptic method of treating wounds and injuries, by which not only has the art of surgery been greatly promoted and human life saved in all parts of the world, but extensive industries have been created for the supply of materials for carrying the treatment into effect."

ANTI-KAMNIA.—This is a combination of elements belonging to the coal-tar group, and is an American product. It is a white crystalline powder, odorless, and has a slightly burning taste; soluble in hot water and in diluted alcohol, but not in cold water. It acts as an antipyretic, analgesic, and anodyne. The importance attached to this drug, I think, is due to its anodyne and analgesic power, and the celerity with which it acts. As an antipyretic in fevers, it acts more slowly than antipyrin, but is not attended with as much depression

of the cardiac system and cyanosis. Whenever a sedative and an analgesic together is indicated, this remedy meets the demand. In severe headaches it is the remedy *par excellence*.—C. A. JULIAN, M.D., Louisville Medical College, in *N. C. Medical Journal*.

M. PASTEUR ON RABIES.—M. Pasteur addressed the following reply to a lady who recently wrote to him for information respecting the symptoms of rabies: "M. Pasteur has had pleasure in receiving your letter of May 31st. The bite of a dog is only dangerous when the dog has got rabies. If there is any doubt in respect to this, the manner in which it may be found out is the following: Put the dog that has bitten where it can do no further harm. Have it examined by a vet., and if it has the rabies its characteristic symptoms will not be long of being observed, and the animal will certainly die in eight days. If at the end of that time no symptoms of rabies has been observed, the bite cannot cause hydrophobia, and there is no reason that the animal should be destroyed."—*New York Medical Record*.

In the list of persons to whom Lord Rosebery has just granted pensions under the Civil List we note the following: Mr. John Beattie Crozier, in consideration of his philosophical writings and researches, £50; Dr. Thomas Gordon Hake, in recognition of his merits as a poet, £65; Mrs. Alice Margaret Hassall, in consideration of the services of her late husband, Dr. Arthur Hill Hassall, £50. Dr. Beattie Crozier graduated as M.B. in the University of Toronto in 1872. His writings, which are highly thought of by Mr. Herbert Spencer and other leaders of modern thought, include "The Religion of the Future," published in 1880, and "Civilization and Progress: Being the Outlines of a New System of Political, Religious, and Social Philosophy," a second edition of which appeared in 1888.—*British Medical Journal*.

MEAT-EATING, VEGETARIANISM, AND MANNERS.—A good deal has been said, recently, about the bad temper caused by meat-eating, and, by implication, of the mild gentleness of those who subsist on roots and herbs. The *National Popular Review* is moved to champion the flesh-devouring man, and says: "The Hindoo professional assassin or murderer is probably as cold-blooded and ferocious a being as one may imagine. The Chinese are great vegetarians. Rice, beans in the green state, cabbage and large spinach, watercresses, and fruits enter largely into their diet. They are, besides, very fond of fish, and yet there is nothing more bloodthirsty and bellicose, more wild or more unmanageable, than the Chinaman when aroused. On the other hand the native Californians, like the dweller on the wild pampas of South America, who lived on an exclusive beef diet, were generous, self-composed, and not in the least given to either strife or bloodshed."—*Boston Medical and Surgical Journal*.

PROFESSOR BILLROTH AS AN OPERATOR.—The general public, not unnaturally, assume that a great surgeon is necessarily a most skilful operator, a mistake not infrequently made by the profession also. Ingenuity, however, and boldness in devising operations are very different attributes from the manipulative skill, decision, and tact required to carry them out. Professor

Billroth united the two sets of qualities in a very conspicuous manner. Yet it was always the guiding intellect rather than the manual dexterity which impressed itself on the spectator. Truth to say, in the actual performance of an important operation Billroth showed no very marked superiority over his fellow-surgeons. He avoided any show of brilliancy or flourish, went steadily to work, erred, if at all, on the side of slowness, and was neither more nor less discomposed by any complication or untoward event than any one else. The finish of his operative work was rather the result of his immense experience than of any remarkable aptitude. Nevertheless, as an operator, he must be held to have justly earned a very high place.

MR. GLADSTONE'S EYESIGHT.—We are authorized to state that a careful examination was made of Mr. Gladstone's right eye on Thursday, the 19th inst., exactly eight weeks after the operation for cataract. The eye is, and has for some time been, strong and quiet. In the earlier period there was rather more than the usual ciliary redness, and for a short time, at about the end of the first week, there was some threatening of inflammation of the iris; the pupil, however, dilated promptly and widely under the influence of atropine, and no iritis occurred. Though the lens was hard, and came out easily, the pupil is now sufficiently obstructed to render a needle operation necessary sooner or later, the operated eye being, in its present state, somewhat less useful than the other. With the other eye, which is affected by immature cataract, Mr. Gladstone can still, with the aid of a weak solution of atropine, see to write and to read good print moderately well. Mr. Gladstone is remarkably well and very vigorous, but he is troubled with an occasional slight return of his old ailment if he walks too much.—*London Lancet*.

REWARDS FOR FECUNDITY.—The Province of Quebec has a law bestowing one hundred acres of government land upon every father of a family who has twelve living children, issue of a lawful marriage. Up to the present 174,200 acres of rich agricultural land have been given away in bounties to 1,742 fathers of twelve or more children, who have complied with the conditions of the act. Not all of these proud fathers, however, are satisfied with the amount of the bounty, for instances of families of twenty or more children are not rare, and the fathers of these want a proportionately higher reward for their patriotic efforts. One old gentleman, Mr. Paul Belanger, of River du Loup, wants three hundred acres, and bases his claim upon the fact that he has thirty-six living children. Another claimant for an increased allowance is Mr. Theoret, of St. Genevieve. His wife, who is but thirty years of age, has presented him with seventeen children. She has just given birth to triplets for the second time in five years, and has had twins three times. Mr. Theoret hopes to acquire a large portion of the province if his wife will continue to do her share.—*New York Medical Record*.

THERAPEUTICS OF SYRUP OF FIGS. — The medical profession should understand at once the composition of "Fig Syrup," so extensively advertised in the leading medical journals of this country. Its laxative properties are obtained from the well-known drug, senna. The company make no secret of

this, but simply claim that they have succeeded in obtaining the active principle from the senna in such a manner that it can be so combined with other agents as to give a pleasant mixture. The natural taste of senna is both nauseous and bitter, decidedly disagreeable in odor and taste. To overcome these objections the drug has been prepared in a number of ways. But in the form of the Fig Syrup it is a most palatable preparation, to which the youngest child or most fastidious lady could not object. Bartholow says that senna "is highly prized" by many patients as a remedy for habitual constipation. He also states that it does not cause inflammation or hypercatharsis, and its purgative action is not followed by intestinal torpor and constipation. He further adds that "it is a very safe and serviceable cathartic."

CHEAP TEMPERANCE DRINKS.—We have once again received a strong denunciation of temperance reformers for not having discovered a cheap, palatable, and popular teetotal beverage. The advocates of abstinence are not, however, specially blameworthy in this matter. Repeated attempts have been made, by the offer of handsome prizes, by abstainers and others, to stimulate the production of such a drink, but the issue hitherto has been failure. In a well-known attempt of this kind, of the forty-seven competing beverages it was truly said that the attractive were intoxicating, and the unintoxicating repulsive. There are several varieties of effervescent, pleasant, non-alcoholic drinks, such as orange and lime-fruit champagnes, but a still and pleasing liquor has not yet been forthcoming, at least such a one as would prove acceptable to the public. Whoever succeeds in producing such an article will speedily make a competency. This achievement ought not to be beyond the resources of modern manufacture. Meantime, we know no more refreshing drink, especially in hot weather, than lemon juice in iced water, but it ought to be drunk moderately. Ginger beer in penny stone bottles, or "home-made" selling at a penny a bottle, is an extremely pleasant, wholesome drink, to our palate more acceptable than champagne of whatever brand. It is far more refreshing than the costly ginger ales of commerce, of which the price is at least three times as high.—*British Medical Journal*.

INGLUVIN is the name given to a preparation made from the gizzard of the domestic fowl. It is a yellowish, gray powder of a faint odor, and almost devoid of taste. It is insoluble in water. Ingluvine is put up by its manufacturers (Messrs. William R. Warner & Co., of Philadelphia) in 5-grain tablets. Ingluvine is compatible with alkalies. Its virtues reside in a peculiar bitter principle which enters into its composition. It is prescribed in the same doses and combinations as pepsin. Ingluvine was introduced to the notice of the medical profession about 18 years ago. It is of special benefit in the relief of sick stomach. This substance may be given with success when vomiting depends upon organic affection of the stomach, as in acute and chronic gastric catarrh and in gastric ulcer. Nausea, due to disease of other abdominal or pelvic viscera, as the liver, kidneys, uterus, and ovaries, is likewise relieved by the administration of this remedy. It allays the gastric irritability which accompanies tabes-mesenterica and marasmus. Vomiting produced by over-indulgence in liquor has been subdued by its powers. It has been found of

advantage in cases of sea-sickness, and in the relief of the gastric irritability of bottle-fed babies. Its peculiar province, however, is alleviation of the vomiting of pregnancy, in which it approaches the character of a specific. As every one knows, this difficulty is frequently very intractable, and one approved remedy after another may be used without avail. To those who have witnessed repeated failures of medication, ingluvin can be recommended as one of the most efficient remedies which we possess for the relief of this distressing symptom. Ingluvin is likewise beneficial in dyspepsia, when produced by functional inactivity. It is able to promptly check the diarrhoea which is caused by indigestion. By reason of its influence upon the stomach and bowels, ingluvin is capable of marked service in cases of cholera infantum and cholera morbus. From the preceding account, it will be seen that ingluvin possesses an exceedingly important sphere of usefulness. Ten grains I found generally a sufficient dose. In some instances 20 grains were required, while in the milder forms of indigestion a 5-grain tablet, after each meal, accomplished the desired purpose. To infants I gave the remedy in doses of 1 or 2 grains.

THE DISCOVERY OF CHLOROFORM.—The *Century Magazine* for January contains a paper on "Sir James Simpson's Introduction of Chloroform," written by his daughter. Following up the American discovery of sulphuric ether as an anæsthetic, we are told of Simpson's infinite pains and frequent disappointments in his search for a more effectual means of avoiding the agonies of operation. Sir James was daring even to rashness in his experiments, and, as a rule, tried the effect of agents upon himself, more than once endangering his life in doing so. The account of the first trial of chloroform reminds one somewhat of the Bacchanalian orgies of Squire Western and his bucolic companions, and, despite the weighty interests with which the sitting was fraught, we cannot repress a smile at the ludicrous disappearance of the investigators "under the table." On returning home after a weary day's labor, Dr. Simpson, with his two friends and assistants (Drs. George Keith and Mathews Duncan), sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material which, on account of its great weight, he had hitherto regarded as of no use. It happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of loose paper, and, with each tumbler newly charged, the inhalers resumed their occupation. Immediately an unwonted hilarity seized the party; they became bright-eyed, very happy, and very loquacious, expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence and quite charmed the listeners—some ladies of the family and a naval officer, a brother-in-law of Dr. Simpson. But, suddenly, there was a talk of sounds being heard like those of a cotton mill, louder and louder; a moment more, then all was quiet; then a crash. On awaking, Dr. Simpson's first perception was mental. "This is far stronger and better than ether," said he to himself. His second was to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned about, saw Dr. Duncan beneath a chair; his jaw had dropped, his eyes

were staring, his head was bent half under him ; he was quite unconscious, and was snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs making valorous efforts to overturn the supper table, or more probably to annihilate everything that was on it. After such convincing testimony to its power, Sir James lost no time in publicly proclaiming the virtues of the new anæsthetic.

SEVENTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

The American Association of Obstetricians and Gynæcologists will hold its seventh annual meeting at Toronto, Ont., Wednesday, Thursday, and Friday, September 19th, 20th, and 21st, 1894. The following is the preliminary programme, subject to amendment until September 1st, namely: (1) President's address, George H. Rohé, Catonsville, Md.; (2) Personal Experience with Pus Tubes: When to Operate, How to Operate, and the Results of Operation, Jas. F. W. Ross, Toronto, Ont.; (3) Relation of Hysteria to Structural Changes in the Uterus and Adnexa, A. P. Clarke, Cambridge, Mass.; (4) Demonstration of a Mechanism of Intussusception (rabbits), Robert T. Morris, New York; (5) Nephrectomy, L. H. Dunning, Indianapolis; (6) Treatment of Distension of the Fallopian Tubes without Laparotomy and Removal, Frank A. Glasgow, St. Louis; (7) Hysteria in Pregnancy, W. P. Manton, Detroit; (8) Relations of Renal Insufficiency to Operations, Carlton C. Frederick, Buffalo; (9) *a*, Importance of Recognizing Septic Puerperal Endometritis Early, and Its Treatment; *b*, Demonstration of a Portable Operating Table for Gynæcological and Abdominal (Trendelenberg) Work, Edward J. Ill, Newark, N.J.; (10) Suspension of Retroflexed Uterus by the Utero-ovarian Ligaments, with Report of Cases, Reuben Peterson, Grand Rapids, Mich.; (11) The Element of Habit in Gynæcic Disease, Geo. F. Hulbert, St. Louis; (12) Some Results of Ether Anæsthesia in Abdominal Operations, I. S. Stone, Washington, D.C.; (13) Report in Abdominal Surgery, Presenting Cases, A. Vander Veer, Albany; (14) Supplementary Paper on Abdominal Section in Intrapelvic Hæmorrhage, M. Rosenwasser, Cleveland; (15) Conservative Midwifery, J. M. Duff, Pittsburg; (16) The Cause of the Thirst following Abdominal Section, Eugene Boise, Grand Rapids, Mich.; (17) The Care of Pregnant Women, W. B. Dewees, Salina, Kan.; (18) The Present Status of the Surgical Treatment of Uterine Fibroids, Lewis S. McMurtry, Louisville, Ky.; (19) *Discussion*—Inflammatory Disease of the Uterus and Appendages and of the Pelvic Peritoneum. (*a*) Introductory Remarks, William Warren Potter, Buffalo; (*b*) Historical Sketch, Edward J. Ill, Newark, N.J.; (*c*) Clinical History, Charles A. L. Reed, Cincinnati, O.; (*d*) Causation and Pathology, Lewis S. McMurtry, Louisville, Ky.; (*e*) Diagnosis and Prognosis, James F. W. Ross, Toronto, Can.; (*f*) Treatment, M. Rosenwasser, Cleveland, O.; A. Vander Veer, Albany, N.Y.; J. H. Carstens, Detroit, Mich.; A. H. Cordier, Kansas City, Mo.; (*g*) Results—(*a*) When Untreated; (*b*) Under Various Methods of Treatment, Joseph Price, Philadelphia, Pa.; (20)

Intercurrent Typhoid Fever in Pregnancy, Thomas E. McArdle, Washington, D.C.; (21) Notes on a Case of Cholelithiasis, Frederick Blume, Alleghany, Pa.; (22) Perineal Operations, Joseph Price, Philadelphia; (23) Remarks Bearing on the Surgical Treatment of Intussusception in Infants, Based on Two Successful Cases, Henry Howitt, Guelph, Ont.; (24) The Limitations of Surgery in the Treatment of the Uterus and its Appendages, William H. Myers, Fort Wayne, Ind.; (25) The Incision in Abdominal Surgery—Methods and Results, J. H. Carstens, Detroit, Mich.; (26) Abdominal Section in Ectopic Gestation, where the Fœtus is Living and Viable, X.O. Werder, Pittsburg, Pa.; (27) Restoration of Intestinal Continuity without Mechanical Devices, William E. B. Davis, Birmingham, Ala.; (28) Hysterectomy for Cancer of the Uterus, E. W. Cushing, Boston, Mass.; (29) Chronic Progressive Atrophy of the Vulva (Kraurosis Vulvæ), Its Pathology and Radical Treatment, Charles A. L. Reed, Cincinnati, O.; (30) The Reason why Patients Recover from Tuberculosis of the Peritoneum after Operation, Robert T. Morris, New York; (31) Report of Two Cases of Injury of the Ureter following Operation for Cancer of the Uterus, L. H. Laidley, St. Louis; (32) Vaginal Fixation of the Uterus as a Cure for Retro-displacements, Clinton Cushing, San Francisco; (33) Hydrosalpinx, A. H. Cordier, Kansas City; (34) *Discussion*—Should Antiseptic Vaginal Douching be made a Routine Practice in the Puerperium? Referees, A. H. Wright, Toronto; Thos. Lothrop, Buffalo; J. Edwin Michael, Baltimore, Md.; A. T. Machell, Toronto; (35) Infectious Diseases during Pregnancy, Dr. A. H. Wright, Toronto; (36) Congenital Diaphragmatic Hernia—Reports of Two Cases, H. T. Machell, Toronto; (37) Report of some Interesting Abdominal Operations, with exhibition of specimens, Rufus B. Hall, Cincinnati.

OBITUARY.

DR. ISAAC WESLEY BROWN, of Beachville, Ont., died at his home, July 20th, 1894, from cancer of the pancreas, as was discovered by post-mortem examination. He became a licentiate of the Medical Board in 1858, and at once went to Beachville, where he practised continuously until a short time before his death. He was successful in practice, and was highly esteemed in the county of Oxford. He was 57 years of age, and left a widow and three children.

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ADDRESS OF THE PRESIDENT OF THE CANADIAN MEDICAL ASSOCIATION.*

BY DR. HARRISON,
SELKIRK, ONT.

Gentlemen of the Association :

MY first duty, as well as my pleasure, is to thank you for the honor you have done me in placing me in this position, an honor as unexpected as it was unsought. In fact, I might well have great misgivings as to my ability to fill it, for I need not tell you the mantle of my many able predecessors has not fallen on my shoulders, and I should not have accepted it had I not felt that I could rely upon your assistance and indulgence.

The subject of my address has been one of grave consideration. I might have taken the history of medicine or surgery, but it is trite, and has been worn threadbare. The history of the developments and improve-

*Delivered at the meeting of the Canadian Medical Association, held in St. John, N.B., August 22nd, 1894.

ments during the last one, two, or three decades, in this age of books and journals, is the property of the whole profession, especially of those who take enough interest in its progress to attend this meeting. It was with a good deal of diffidence that I took as my theme my personal experience and observations in medicine, extending over upwards of half a century.

Over fifty-seven years ago, with my father, the late Dr. Harrison, I settled near the shore of Lake Erie. The country at that time was an unbroken forest, with merely a thin and scattering fringe of settlements on or near the lake. The soil was heavy clay, and the surface very gently undulating. The water supply was mainly derived from the rainfall. The watercourses were more or less obstructed by the *débris* of the forest, so that the swamps held their moisture all summer, or until dried by slow evaporation or percolation. At this time miasmatic diseases were so prevalent that very few passed a summer without an attack of ague, and bilious remittent fever was common, and sometimes fatal, especially among the unacclimated. It was no uncommon thing to find, during the hot weather of summer, cases of ague or remittent fever in every house in a settlement, and frequently every member of a family would be attacked at once. Unacclimated persons who were healthy and vigorous sometimes passed the first summer without being attacked, but the fact that they developed it early the next year showed that the poison, though dormant, was still present, and had preserved its virulence through the long period of winter, ready to show itself on the first occasion of the lowering of the powers of life. When the system became saturated with the miasmatic poison, the patient was generally attacked every summer, as soon as the weather became warm, and it stuck to him either continuously or with intervals of apparent convalescence until the approach of cold weather. This would go on for, perhaps, from three to five years, when the susceptibility to the disease seemed to be worn out, but it left the patient with a constitution so shattered that it took years to recuperate, and left him an easy prey to the first serious attack of disease.

The miasmatic poison was so omnipresent that it complicated almost every other disease. I remember my father saying that he had scarcely seen an uncomplicated case of pneumonia, and the man who ignored its presence had little success in treatment. Quinia would check it as certainly, and I think in much smaller quantities than we now require. From ten to twelve grains in two-grain doses rarely, if ever, failed to stop the ague for at least seven to fourteen days.

At the same time there was a peculiar and very fatal disease among cattle. It had the local name of murrain. The animal was seen to be ailing; the eyes became sunken, the extremities cold. In a short time a bloody diarrhoea and hæmaturia ensued, and the animal died in from

twelve to twenty-four hours. A case of recovery was almost unknown. This disease was so prevalent that scarcely a herd escaped, and a farmer frequently lost from one-fourth to one-half his stock of horned cattle. Horses and sheep were not affected. In the next township to the west of us the soil was porous sand, well watered with springs and spring streams, and here, though ague was not uncommon, this disease of cattle was unknown.

Contrary to an opinion frequently advanced, the presence of malaria was not accompanied with the absence of typhoid, which, I think, was as prevalent as it is now.

When my father settled here, there was not a doctor nearer than a day's ride, and the medicine was entirely domestic. Charms and incantations were largely depended upon in cases of ague and hæmorrhage; but in cases where remedies were used they were pushed with a vigor that would take the breath of the modern patient. Whiskey was the universal remedy, and had the advantage of being indicated in all diseases, in all their stages, and in all conditions of the patient. It was a *sine qua non* in midwifery. I remember, when a boy, riding with two old settlers through the woods, and while passing a log house, many miles from the nearest neighbor, a woman rushing out and hailing one of the men with, "Have you any whiskey?" He slowly and hesitatingly acknowledged that we had a bottle, "just enough to take us through the woods." "You will have to give it to us," says the old woman. "Here's a woman sick, and no whiskey. Did you ever hear of such a thing?" My friend took a parting drink, and then, with a "longing, lingering look" at the departing spirit, handed the remainder to the midwife.

A disciple of Thompson had carried his peculiar ideas into the settlement, and the beautiful simplicity of the doctrine, "Heat is life, and cold is death," and that you had only to throw off the "cold phlegm" with lobelia, and keep up the heat with red pepper, to cure your patient, had gained many followers; and I know of at least two deaths caused by the lobelia.

Bleeding was resorted to on the slightest provocation, and there was scarcely a neighborhood that did not boast of a man who could open a vein with a dexterity that would shame the majority of the graduates of to-day; and the enormous bowls of the various infusions and decoctions that were poured down the patient would go far to convince the observer that, as in the case of New York's historian, they intended to drive out the enemy by inundating the seat of war. Some of their medicines were nauseous enough to have been derived from the pharmacopœia of the dark ages, the Chinese, or the homœopathists. An infusion of the excrement of the sheep was commonly prescribed for measles, and that of

the cat—no bad substitute for *asafoetida*—was considered “the sovereign’st thing on earth for fits.”

My father was the first in the neighborhood to treat diseases *secundum artem* ; but in those days the principles of medicine as taught by Sydenham and Cullen had not become obsolete, and he never hesitated to use contra-stimulants or the lancet in inflammation, in what was called inflammatory fever, or sthenic cases of disease with hyperaction, where he considered that the patient’s constitution would endure the treatment.

It was in this school that I learned the first rudiments of medicine, and in the first years of my practice I used the lancet with more or less freedom. And though the doctrine of Hugh Bennett and his followers has largely affected my practice, I am by no means convinced that the disuse of the lancet has been an unmitigated blessing. As there were brave men before Agamemnon, so there were skilful and *successful* physicians before we were thought of, or a bacterium discovered. It was certainly a dangerous mode of treatment for the mere routinist, who bled, blistered, and salivated each patient, as a matter of course ; but was a powerful weapon for good in the hands of the careful, observing physician, who understood the course and effect of disease, and carefully and intelligently studied and watched those of his remedies. And while our modern treatment saves patients who would have died under the old régime, I am convinced that the vigorous treatment of our fathers saved many who would have been allowed to die under the expectant treatment so fashionable a few years ago.

Diphtheria reached us before railways had opened up the country, and I repeatedly saw it on isolated farms, surrounded by woods, and where it could not possibly have been carried from without, and where the land had been so recently redeemed from the forest that it could not have been derived from some previous but forgotten case. This has seemed to me to prove that the origin of the Klebs-Lœffler bacillus requires further investigation. We also had cases of cerebro-spinal meningitis ; and I was much interested in a paper read by Dr. (now Sir James) Grant at the first meeting which I attended of this association, in (I think) the year 1869. It was on “Cerebro-spinal Meningitis,” or, as he termed it, “Purpuric Fever,” as it appeared in the Ottawa Valley. It had appeared with us at the same time ; and, changing the locality and the names, his paper would have fairly described my cases and their results.

The country became rapidly and thoroughly cleaned and drained, and it so completely rid us of the cause of miasmatic disease that I have scarcely seen a case of ague in twenty or twenty-five years, nor a case of old-fashioned remittent in my own practice of some forty years, and it is so long since we have had a case of murrain among our cattle that it has

ceased to be a tradition. We have occasional cases of typhoid ; but, though for years there was no attempt to isolate the patient, it is very seldom we have had a second case in a neighborhood. We have a German settlement near us, where it is considered to be the duty of every one within reach to visit the sick, which they do without the slightest precaution, yet I never saw it communicated. In the township adjoining, where the soil is very porous, the opposite obtains. There an isolated or single case is the exception. Time and time again I have seen a case of typhoid fever followed by one, two, or three others, in the same house, or in the immediate vicinity. The only difference between the localities is in the soil and in the water. Their water is spring, and from either springs, wells, or streams is bright, sparkling, and good-tasted ; while ours is far from being clear, and is contaminated with clay, lime, magnesia, and sulphur. But while our soil is heavy and impervious, theirs is as porous as a sponge ; and, I feel sure, allows the poison from the patient and his dejecta to find its way into the wells. These facts seem to me to go far to show that, if we disinfect or take care of the dejecta from our patients, there is little danger of spreading the disease.

For a long time in my earlier years I had no medical friend within easy reach, so that I had frequently to operate without assistance, and I have more than once amputated the leg or thigh with only the aid that a resolute neighbor could give, and I have been so used to perform all the operations required in obstetrics without medical assistance that I never think of asking for a consultation. But this state of affairs has its disadvantages. While it has a tendency to make a practitioner self-reliant and resourceful, and has bred in Canada a host of practical men, perhaps, second to none, it has a tendency to make a man opinionative and obstinate. In the language of Pasquier, he is apt "to think there is nothing left for him to learn ; he entertains oftentimes the most absolute confidence in himself, and the most profound disdain for all who do not share the ideas—the opinions he has already conceived unto himself." Or else he is apt to get into a rut, and to develop the mere routinist.

After my father's death, I particularly felt the necessity of meeting other medical men at least equal to myself, and with greater or more varied experience ; and, as soon as this association came within reach of me, I attended and joined it. I think this was at its second or third meeting, and I have attended most of its meetings since. When the Ontario Medical Association was formed, I was one of the first to join, and have been an active member from that time, and I attribute any measure of success I may have achieved to these circumstances. I hold it to be the duty of every live medical man in Canada to support these associations and to attend their meetings, and that the man who has an

opportunity to attend, and does not, fails in his duty to his profession, to himself, and to his patients. It is not enough to belong to his local society, and it is not correct or fair to hold that the Provincial Association takes the place of, or is in any way the rival of, the Canada Medical. The provincial societies should be its feeders, for, while the provincial associations are necessary to unite and to promote the brotherhood of the profession in each province, it is the Canada Medical that is the common bond of the profession of the Dominion, that knows no provincial boundaries, and unites the medical men from the Atlantic to the Pacific. But here we find an anomaly which, it seems to me, is a disgrace to the profession. Any medical man of good standing in his own province is eligible for membership of this association, and can attend its meetings anywhere ; but, if he wishes to practise, the moment he crosses the imaginary line which bounds his own province, he is met by a shibboleth both vexatious and humiliating.

A man who, for a quarter of a century or upwards, has practised with credit and success is, on entering another province, required to pass the examination of a student ; the examiners, perhaps, men without a tithe of his experience or ability—men perhaps unborn when he entered the profession. Surely this state of affairs should not and need not exist. Its inconvenience and unfairness must be manifest to all, and it should be the duty of this association to remove the anomaly. It has been several times brought to its notice. I remember hearing it discussed in, I think, the year 1869, by the president, Doctor, now Sir Charles, Tupper, but so far we have done nothing. The different standards of matriculation and education, the varying width of the portals to the profession in the different provinces, is, I think, the main obstacle. And one can easily see the unfairness of asking a province where the standard is high, the period of study required long, the examination rigid, and where the university degree gives a man no right to practise, to admit, on equal terms, men who have qualified in provinces where they are admitted on much easier terms, and where the university degree of M.D. is all that is required to obtain a license or to register. One can see that the result would be "a beggarly account of empty" benches in their colleges, while their students would go in crowds to the universities in the provinces where they found a royal and easy road to practice.

The only way to accomplish this is to establish a common curriculum, a common standard, a common portal to the profession, for all the provinces in the Dominion ; and when a man has once entered he should be entitled to register in any of them ; and as medical education, like the Roman eagles, cannot be allowed to retrograde, the requirements to practice should be based upon those of the province where these are the high-

est, and where the examinations are the most rigid. This can work no injustice. Our standards are none of them too high. A few days ago Mr. J. Greig Smith, in the address on Surgery before the British Medical Association, said : " Are we to lower the standard of surgery so that our brains may not be strained, or are we to strain our brains that surgery may be raised ? " And he answers, " Let surgery rise, if brains fall ; let the weak, the lazy, or the impatient fall out, but do not let us lower our standard because some men cry it is too high. It cannot be too high." I think this sentiment will be endorsed by this association, and I think no man competent to give an opinion will say that in any of the provinces we have too high a standard.

We can only assimilate our varying standards by a joint action of all the provinces, and, as this association is the only body which contains, or should contain, representatives from them all, I think we must depend upon the Canada Medical to achieve this result. It has been for a long time held in abeyance, but the growth of our country, the increase in population and importance of many provinces and territories, which were not in existence when this subject was first brought up and discussed, and, above all, the enormous and continuing increase in the numbers of medical men, render its consummation more necessary than ever ; and although I am an old man, and in the course of nature not likely to practise much longer, and although it would not affect me personally, still, as a member of a profession that has descended to me in a direct line through surgeons, some of whom existed more than a century before I was born, and which I have transmitted to my eldest son, I am deeply interested in this question, and if I can feel that I have done anything to help throw down these barriers, and unite the profession of our whole Dominion, I shall consider my time well spent, and that I have not for so many years been a member of this association in vain.

POTASSIUM PERMANGANATE, THE NEW ANTIDOTE TO MORPHINE. REPORT OF EXPERIMENTS.

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THIS article was originally suggested by the published results of certain experiments carried on by M. J. Anthal, an Alsatian chemist, by which he claimed that potassium permanganate was an efficient antidote to a number of alkaloids, as well as to phosphorus and oxalic acid. These investigations were further continued by Dr. Moore, of New York City, in a report as to action in particular on morphine, and he further compelled attention, professional and otherwise, by taking three grains of morphine openly, followed by the antidote, and sustaining no ill effects through the action of the drug.

I might state here, before describing my experiments, that they confirm those of Dr. Moore as regards morphine; at the same time, I have brought out some new facts that may be of use to the profession.

To discuss the subject thoroughly, it is advisable to first consider the chemical properties of morphine and potassium permanganate which pertain to their action upon one another.

Of all the vegetable alkaloids, morphine is the most easily oxidized. Indeed, it is so easily acted upon by oxidizing agents that iodic acid HIO_3 will oxidize it, iodine being liberated. This is a distinguishing test for morphine. I might say that a ptomaine has been recently isolated which has a similar action upon iodic acid.

Potassium permanganate $\text{K}_2\text{Mn}_2\text{O}_8$ is one of our most active oxidizing agents, as it corresponds to manganese heptoxide Mn_2O_7 . Now, when this comes in contact with any substance which is capable of oxidation, it gives off oxygen, becoming reduced to one of the lower oxides of manganese, or, in the presence of acids, to salts corresponding to the lowest oxide.

The action of potassium permanganate upon some alkaloids is fairly well known. With quinine, cinchonine, quinidine, and cinchonidine, it

forms pyridine tricarboxylic acid (1, 2, 3). In order to ascertain the action of potassium permanganate upon morphine, I performed the following experiments :

Experiment 1. I dissolved half a gramme (7.7 grs.) of morphine hydrochloride in 250 c.c. of water, acidified with hydrochloric acid. Then I gradually added a solution of potassium permanganate of same strength, *i.e.*, two grammes per litre. At first the violet color quickly disappeared, but as I added the permanganate the color disappeared more slowly. When an equal quantity of permanganate was added the violet color remained for two or three minutes. When the solution became colorless, I tested part of it for morphine by adding ferri chloride and then potassium ferri-cyanide, which is a test, delicate to at least 1 in 100,000. I also confirmed the result by making the remaining part of the solution alkaline with potassium carbonate, shaking with a mixture of equal parts of ether and acetic ether, separating the ethers, allowing the ethers to evaporate, and testing residue for morphine, with negative result.

From these experiments, we conclude that morphine is decomposed by potassium permanganate, and the question arises, what becomes of the morphine? Our chemist states that it forms pyridine tricarboxylic acid $C_5H_2N(COOH)_3$. However, that does not appear to be correct.

Experiment 2. I added to the solution, as in Experiment 1, white of egg, cane sugar, grape sugar, starch, and acetic acid. I then repeated the experiment, using the same quantity of potassium permanganate, with the same result as in Experiment 1.

Experiment 3. Next, to determine the action when potassium permanganate is added to a neutral solution of morphine hydrochloride, I dissolved 1 decigramme of morphine hydrochloride in 100 c.c. of water, and gradually added the potassium permanganate solution. At first the liquid appeared green, due to potassium manganate. Afterwards a bulky, black precipitate, which consisted of manganese dioxide MnO_2 , and manganous manganite Mn_3O_4 . When the solution remained violet for a minute I filtered and tested the filtrate for morphine, with negative result.

Having proved that morphine was decomposed by potassium permanganate, I performed the following experiments with a view of ascertaining the toxic action, not only of morphine and potassium permanganate, but also of the new substance or substances formed by the action of potassium permanganate on morphine.

TOXIC ACTION OF POTASSIUM PERMANGANATE.

As a rule, a chemical antidote must not be an active poison to be of therapeutic use. When a strong solution of potassium permanganate is applied to a mucous membrane, it corrodes it. However, a dilute solution

(1-500) has no corrosive action, as may be shown by holding it in the mouth several minutes without corrosion of the mucous membrane, nor discoloration of the permanganate. With a view of ascertaining its toxic action internally and hypodermically, I performed the following experiments :

Experiment 4. To dog of 39 lbs. I gave 6 grs. of potassium permanganate dissolved in 6 oz. of water by the stomach, without any deleterious result.

Experiment 5. Two days after I gave the same dog 3 grs. of potassium permanganate subcutaneously in the neck. In about two hours he appeared drowsy and weak. Next morning, fourteen hours afterwards, the dog vomited, and showed muscular weakness and inco-ordination. The latter was so marked that he had to support himself against the fence. Micturition was frequent, and the urine was found to contain bile-coloring matter and a very small amount of albumin. These symptoms remained constant for about thirty-two hours, when he gradually recovered.

Experiment 6. To a dog of 20 lbs. I gave 5 grs. subcutaneously. The symptoms were similar to those in Experiment 5, but more marked. The dog died in the night, thirty-eight to forty-four hours after administration of the drug.

TOXIC ACTION OF MORPHINE.

Experiment 7. To 39 lb. dog I gave, subcutaneously, 5 grains of morphine hydrochloride. In about half a minute the dog appeared excited, and kept moving his tongue and jaws, with a free flow of saliva, which was followed, in about five minutes, by deep sleep, which lasted about three hours. Nearly all reflex actions were abolished. The respirations were more frequent than normal at first ; afterwards, less frequent. When the narcosis was passing off the dog would occasionally start up, especially at any noise. Afterwards the dog suffered from partial paralysis of hind legs. With drooping tail, he appeared to drag his hind legs after him, assuming the position known as "hyenoid."

TOXIC ACTION OF THE NEW SUBSTANCES FORMED BY THE ACTION OF POTASSIUM PERMANGANATE ON MORPHINE.

Experiment 8. I dissolved $\frac{1}{2}$ gramme (7.7 grs.) of morphine in about 250 c.c. of water, acidified with hydrochloric acid, and then added $\frac{1}{2}$ gramme (7.7 grs.) of potassium permanganate dissolved in same quantity of water. When the solution became colorless I added potassium hydrate until alkaline, which precipitated the manganese. I then filtered and washed precipitate with hot water. The filtrate was evaporated down to about 50 c.c., which I injected, subcutaneously, into a dog, without any marked symptoms.

Experiment 9. Four days after the preceding experiment I gave the 39 lb. dog, by stomach, 5 grains of morphine hydrochloride, and then, immediately, 6 grains of potassium permanganate dissolved in about six ounces of water. No symptoms of morphine poisoning followed, nor were there any other symptoms, except one or two ineffectual attempts at vomiting.

CONCLUSIONS.

(1) Potassium permanganate in dilute solution, not stronger than 1 gr. to an ounce, may be given by the stomach without danger.

(2) Potassium permanganate, subcutaneously, is poisonous.

(3) Potassium permanganate, grain for grain, completely decomposes morphine, the decomposition occurring in acid media more rapidly than in a neutral medium.

(4) Foodstuffs and acetic acid do not interfere with the decomposition.

(5) Potassium permanganate is an efficient antidote if taken while the morphine is in the stomach.

The question still remains as to whether potassium permanganate is of therapeutic use after the morphine is absorbed into the system. It has been proved conclusively that if morphine is introduced subcutaneously into the system it is excreted into the stomach. Now, the morphine passes from the blood into the stomach by osmosis and by excretion, and, by the principle of osmosis, more morphine will be excreted if it is decomposed as soon as it passes into the stomach. Reasoning on this principle, we would expect that repeated small doses of potassium permanganate by the stomach would be of use in cases where the morphine has been absorbed into the system. This is rendered more probable by the fact that morphine, as a rule, is a slow-acting poison.

18 Gerrard Street East, Toronto.

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

E. E. KITCHEN, M.D.,
ST. GEORGE, ONT.

Mr. President and Gentlemen :

IN 1867 a large congress of medical men met at Paris, no less than five hundred of them being foreigners. This was the year of the great World's Paris Exhibition, and it was resolved to make it a permanent institution, and, since then, every two, three, or four years, a great meeting of the medical fraternity has been held in Florence, Vienna, Brussels, Geneva, Amsterdam, London, Copenhagen, Washington, Berlin, and the one which has lately closed at Rome. The success of each has been varied, and notably those held in London in 1881, Berlin in 1890, and Rome in 1894 have been pronounced great successes. At London over 3,000 members assembled, one-third of whom were from distant lands, and were presided over by the distinguished Sir James Paget; while the Berlin meeting gloried in the large increase to over 5,000, over whom presided the world-famed Professor Virchow. This has now been nearly eclipsed by the Eternal City, that has drawn within her walls the large number of 7,800 delegates, accompanied by 1,200 ladies. Of this number nearly 1,000 were Germans, 800 English, 800 Austrians, 700 French, 300 Spaniards, 250 Russians, 250 Swiss, 175 from United States and Canada. Thirty-five countries were represented, these coming from every clime—even from the island of Borneo. To accommodate so large a number was an easy thing for Rome, for she had been preparing a place for their meetings for a long time. The city was building a hospital, called the Policlinico, just outside the walls, and hurried it on to its completion in order to give a grand place of meeting to the congress. This consists of five large buildings in a line, connected with each other by a passageway, the largest, in the centre, being used for administrative purposes, for president's and general secretary's offices, manager, foreign committees, post, telegraph, and telephone offices. The other buildings are in the form of the letter V, and are intended for two surgical clinics and two medical clinics, but, for the present, were kindly given for the nineteen sections.

*Read before the Ontario Medical Association, June, 1894.

Building "B" proved a pleasant meeting place for the sections of Hygiene, Dermatology, and Syphilology, Sanitary Engineering, Hydrology, and Climatology; while building "C" contained Internal Medicine, Diseases of Children, Physiology, General Pathology and Pathological Anatomy, Forensic Medicine, Psychiatry, Neuropathology and Criminal Anthropology; building "D" gave nice seating accommodation to the sections of Pharmacology, Laryngology, and Otology; and building "E" gave similar room to the sections of Surgery and Orthopædy, Anatomy, Obstetrics and Gynæcology, Military Medicine and Surgery, Ophthalmology, and Odontology. It was here that the meetings were held from 8 a.m. to 3 p.m. (15 o'clock by continental reckoning). The general sessions were held in the large Eldorado amphitheatre in Via Genoa at 4 p.m. It was in the Eldorado, on Thursday morning, March 28th, that I met with my first actual experience at the great congress. At an early hour the large offices were crowded, and a glance around soon showed me that the larger number were making their way to the Treasurer's office, where a deposit of twenty-five lira constituted me a member. Then a call upon other officials soon supplied me with all necessary information. The tessara, or ticket of membership, not only admitted me free to galleries, palaces, etc., in Rome, but acted in a similar manner anywhere throughout the Kingdom of Italy. At half-past eight in the evening a reception of ladies and gentlemen of the congress was held in the Palace of Arts, adjoining the Eldorado, where an immense throng congregated, and many acquaintances were made which added greatly to the pleasure of the following days. On Thursday morning the long-expected event, the formal opening of the congress, was held in the Constanzi Theatre. Long before the hour of ten had arrived, that great building was densely packed. The Queen, leaning on the arm of the King, made their way between two lines of guards to the stage amid thunderous applause. Queen Marguerita, radiant, and beautifully dressed, took her seat, while King Humberto, in the uniform of a general, covered with many decorations, stood at her right through the whole ceremony. At a signal from His Majesty, Premier Crispi stepped forward, and, in a robust voice, that could be heard through the whole building, welcomed, in the name of Italy, the congress to Rome, and said many flattering things of the profession. The Hon. Dr. Baccilli, President of the International Medical Congress, and Minister of Education, then arose, and, in beautiful Latin, gave an oration which few are able to do. The applause which met him was as great as his popularity, in and out of the profession, is unbounded. His eloquence was at its height when he referred to the universality of eternal Rome, and to Humberto and Marguerita as examples of royal virtue. Prince Rospoli, the syndic or mayor of Rome, also extended warm greetings on behalf of

Rome. Then Professor Virchow, of Berlin, the last president of congress, arose to speak, and was grandly received, but when it was discovered that the venerable German scientist was speaking in Italian the applause passed all bounds.

A statement of the numbers attending the congress, etc., which I have already given you, was made by the General Secretary, Dr. Maraglioni, of Genoa, who was followed by representatives of foreign committees, etc., in short, terse speeches. Professor Virchow then moved that those who had been occupying the temporary offices be made permanent for the congress, after which His Majesty requested Dr. Baccilli to present him to the foreign representatives, when he thanked a number for their kind words of Italy. A grander sight than this royal couple of Savoy, surrounded by so many representatives, with thousands of upturned faces from the platea, and thousands more looking down from the balconies and galleries above, showing not only that they were from various climes and many lands, but equally plainly their happiness and satisfaction, it would have been difficult to conceive.

The King and Queen then descended to their carriages amid cheers and waving of handkerchiefs and hats, and shouts, in various languages, of "Viva l'Italia! Viva Roma!" At 3 p.m. the members met in their various sections and elected their definite officers. Then commenced the real work of the congress—2,700 papers had been presented, but few, comparatively, could be read; neither had the United States delegates nor those of Canada reason to find fault, for eighteen papers were read from the former country and one from the latter. As it will be impossible to mention every paper, I will but give a passing glance at a few of the very many able ones which were before the congress. One of the earliest was that on "Morgagni and his Influence on Animal Thought," by Prof. Virchow. The learned savant, after hastily sketching the progress of medicine for twenty-eight centuries, referred to the *immoral* pathology of Galen, followed by a school which rose in the East which taught the *spiritual* element. The two schools gradually blended into one, more especially in Italy. As soon as the church granted a reluctant consent to the practice of dissecting human bodies, discoveries became numerous. Harvey discovered the circulation of the blood, and Malpighi extended it to the capillary system. Morgagni, by enquiring into the seat of disease, inaugurated the system of localization of disease, which was the radical and necessary commencement of logical study. He taught us to *think anatomically*, and thus became the founder of modern pathology.

At the close of this address Dr. Casati presented Dr. Virchow with a commemorative gold medal, in the name of the citizens of Forlì, the birth-place of Morgagni.

Prof. Bouchard, of Paris, gave a very interesting address on "Reflex Fevers." He stated that fever patients brought into hospitals have invariably an elevation of one degree of temperature either on the day of arrival or the following day. This elevation is solely due to the influence of the nervous system, an influence which is susceptible of preventive and curative treatment by directly intervening in these causes. Reflex causes protect us more against cold than internal heat. The variations of internal temperature act, as a rule, in an inverse sense. The elevation of temperature seems to be directly in proportion to the intensity of the muscular effort, rather than to the length of time in which it lasts, so that nobody can deny the existence of muscular fever. He also referred to fever accompanying abnormal digestion. He concluded from these facts that the nervous system, when weakened, reacts in a manner which is extraordinarily sensible to all those agents which provoke fever.

Prof. Foster, of Cambridge, gave an extemporaneously delivered address on "Organization in Science." The scholarly speaker pointed out that the salient points of an organized creature were *differentiation* on the one hand, and on the other *integration*. Integration was carried out by the unwritten customs. Differentiation had gone far. There was a time when one man could push forward by himself several sciences ; now each one had to be content to devote himself to a single science, or even to a small portion of that science. Differentiation must go still farther. He pressed upon the congress, where so many nations were gathered, especially a congress of medicine, which he considered the mother of all sciences, that they would be a fitting body and Rome a fitting place for putting forward the question, if there were not difficulties, which required to be overcome by integration among the workers in science. There were two kinds of enquiry, the *individual* and the *combined*. An enquirer was, like a poet, born, not made, and there might be a certain amount of tyranny in exercising the machinery of organization which might destroy individual enquiry. It might interfere with the motives which sustained such an enquiry. There was the motive of ambition, the love of fame. There was likewise the love of curiosity. Organization would prevent men from going over the same ground, and guide young workers who did not know where to begin. He was much opposed to having the crude material contaminating the pure stream of science. He concluded by urging that, if organization were a good thing, nations should join together and carry it forward.

"Idiopathic Hypertrophy of the Heart and the Degeneration of the Heart Muscle" was the title of a paper read by Dr. Laache, of Christiania, Norway. After developing the different theories of disease of the heart, and giving great glory to Italian medicine through Lancisi and Albertini

for their work, the speaker went on to consider the etiology of the disease. He ascribed the cause to be found in beer alcoholism, excessive muscular and intellectual fatigue, and the struggle for life. After recounting the symptoms he passed on to treatment, recommending digitalis, iodide of potassium, and strophanthus. He was opposed to the ancient way of training the heart muscle, but favored sparing the heart as much as possible; in fact, speaking highly of the system recommended by Ortil.

An address, the title being "Non Nocere," "Harm Not," was delivered by Dr. Jacobi, of New York, chairman of the committee for the United States and Canada. The speaker referred to the neglect in the study of special branches. Many so-called specialists were untrained men, and others calling themselves scientific men were given to accepting and recommending proprietary medicines and food nostrums. He considered that harm was often done by rash surgical and gynæcological interference, while overdosing and the expectant treatment were denounced. By neglecting intubation and tracheotomy in critical cases, harm was done. Diseases like pertussis, which could be shortened, should be treated to prevent complications. Eruptive diseases watched and treated, to avoid mental disturbance or collapse. Venesection in pneumonia was advocated, if required to save life. Strong stimulants and great care were often needed in convalescence. He spoke of the folly in overfeeding or underfeeding infants, or too much sugar. Even the use of sterilized milk alone was highly objectionable. He referred to many other practical matters, and closed his paper by referring to the harm done in diphtheria by the application of medicines to struggling infants. An amusing fact in connection with this paper was that the Latin title had been transformed into the Italian "Non Nuocere" on the official programme, the result being a large attendance of Italians, expecting to hear an address in their own tongue by an American. They were badly disappointed, but the English-speaking were correspondingly delighted.

"Transfusion" was the simple name of a paper by Dr. Ziemssen, of Munich. The learned speaker contended that intravenous transfusion of undefibrinated blood is a perfectly harmless procedure in skilful hands, but subcutaneous injection of blood was recommended for those without sufficient experience. The immediate effect of intravenous transfusion was heightened color and an increase in strength, in which the increase in red blood globules and in the proportion of hæmoglobin is not always proportionate. Frequent transfusions of small doses, say, 3 or 4 ounces, was recommended in anæmia as more effectual than a single dose of a larger quantity.

Dr. Golgi, of Pavia, in a well-prepared paper, spoke of swelling and chromatic changes he had observed in the nuclei or the nerve cells of animals dead from experimental rabies.

Dr. Tison, of Paris, reported on a new local anæsthetic which he called "Cooyl." It was a mixture of chloride of methyl and chloride of ethyl. When applied to the skin or mucous membrane, the temperature is reduced to about the freezing point, low enough to cause complete anæsthesia, but not so low as to form eschars.

Dr. Lucas-Chamionnière, of Paris, gave a report of sixty-four cases of trepanation of the skull for epilepsy. Good results were observed when it was performed for the relief of renal epilepsy or certain forms of traumatic meningo-encephalitis, accompanied by pain in head and vertigo, but the operation was not satisfactory in Jacksonian epilepsy.

Dr. Schernlitz, of Nice, spoke for some time on uterine drainage by catgut. He maintained that a certain number of cases, as metritis, salpingitis, amenorrhœa and dysmenorrhœa, could be successfully treated by this method, the only contraindication being acute inflammation of the womb. He contended that catgut drainage was easy of application, not requiring dilatation of the uterus, and perfectly aseptic.

Time will not permit giving my notes on very many other equally interesting papers. Those read were delivered in either English, German, French, or Italian, the only recognized languages of the congress. In connection with this it may be stated that a petition signed by 700 doctors throughout the world, praying for the re-establishment of Latin as the international language of science and hygiene, and that a periodical magazine in Latin be established, was presented to congress.

In closing this hurried sketch of this premier congress, it would be out of place were I to omit the social reception received at the hands of the Romans—the King and Queen, the Pope and Cardinals, the Government and city magnates, the medical men, and *all*, vied with each other to make our stay as pleasant as possible. For this purpose Humberto and Marguerita gave receptions at the Quirinal in the form of a garden party, when the royal couple added much to their already great popularity. The Queen conversed with those presented to her in English, French, and German as fluently as in her native tongue. On Sunday, Rome gave a complimentary concert at the Opera, where many attended, but many stayed away. The same may be said of the horse and bicycle races at Tor di Quinto—many went to Tivoli. On Monday night the illumination of the Forum, Palatine Hill, and Coliseum was something not to be forgotten. On Tuesday evening a reception was given by the municipality of Rome on Capitoline Hill. The buildings surrounding the Piazza Campidoglio were very taste fully illuminated, and the square was a mass of flowers and palms. The throng that filled the Capitoline Museum and the Palace of the Conservators was immense. The little gallery in which that wondrous piece of sculpture, the Venus Capitolini, was illumined by a pale red light, causing

that world-famed piece of art to stand out in all its beauty and symmetry. And through this crowd walked Virchow, surrounded by a dense throng, vying with royalty in the large attention being paid, and receiving it with that peculiar modesty which so befits the man and gentleman. The evening ended with a grand ball, where Rome's daughters appeared in all their grandeur. Wednesday evening was taken up with the dinners of the sections, which were very successful. On Thursday noon the large luncheon was held, and 8,000 or 10,000 gentlemen and ladies sat or stood at the tables in the grand old ruins—the Thermæ of Caracalla. A pleasing feature was—at a given signal, thousands of carrier pigeons were let loose and rose together and hovered for a moment over the ruins, and there fell in their flight hundreds of slips of paper bearing greetings to the congressists assembled. At five o'clock a battle of flowers was waged in the Corso, and in the thickest of the fight was the Queen and her attendants. In the evening the great illumination in the Corso took place, and ended with the archæological procession and the Maccoletti. The illuminated procession consisted of representations of pillars, temples, etc., ending with lanterns, each one representing one of the thirty-five countries at the congress, and having the name of the country inscribed upon it, and closely followed by a similar number of lanterns, each bearing "au revoir," "auld lang syne," and, near Canada, "good-by." Thus closed happily the largest and most successful meeting of medical gentlemen that has been held in our time, if not in all time. A large amount of knowledge was acquired, our views were broadened, and great pleasure attained. These, amid those old and ancient surroundings, will ever be bright in memory's page, and it was not without a pang of regret that I bade good-by to the Eternal City, and looked for the last time, perhaps, on fair Italia's beautiful sky and temperate clime, her mountains of marble, her orange and other groves, and passed by the Riviera into fair France.

PHLEGMON OF THE HAND.*

BY H. MORELL, M.D., C.M.,
SLAYTON, MINN.

GENTLEMEN,—Allow me to present to your attention a disease which we, as surgeons, meet with very frequently, and, therefore, we ought to know about the latest methods of treatment, as also its etiology and pathology.

Phlegmon is a term applied to an acute inflammation, in which the cardinal symptoms, heat, pain, swelling, and redness, are well marked. I wish to make a few remarks to-day on this variety of inflammation, affecting the fingers and hand, generally known in text-books as felon, whitlow, paronychia, or panaritium.

We know that phlegmon of the hand may originate in any of the tissues, but most frequently the point of infection is in the connective tissue of the terminal phalanx, which, by the arrangement of its fibres, tends to propagate the disease toward the deeper structures. The anatomical peculiarities of the tissues in this region are as follows: The connective tissue fibres are intimately attached to the integument. These fibres are short and thick, and separate into various layers to form spaces, in which are enclosed quantities of fat. The main direction of the course of these fibres is from the cutis down to the periosteum, or to the sheaths of the tendons. The lymph channels also follow this course from the integument down to the bone. It will be noticed from the above arrangement of lymphatics how inflammation will extend to the periosteum or tendons.

The manner of the extension of phlegmonous inflammation within the tendinous sheaths of the palmar aspect of the hand is also prescribed by their special arrangement, and it is very important to remember that suppuration may extend along the synovial sheath either of the flexor of the thumb and little finger into the palm, and even far up the forearm, by passing under the annular ligament.

*Read before the Southwestern Minnesota Medical Society, Worthington, Minnesota, July 12th, 1894.

The sheaths of the index middle and ring fingers do not communicate with the general sheath, which passes under the annular ligament, but are closed below, opposite the heads of the metacarpal bones, and therefore, in suppuration in these fingers, the pus does not extend beyond that point. Phlegmon of the thumb and little finger is, therefore, far more serious than the same condition in the three middle digits.

Etiology and pathology. Phlegmon may result from the prick of some unclean instrument or punctured wound of the finger, but by far the most common cause is the introduction and thriving in the living tissues of a micrococcus, chiefly the staphylococcus pyogenes aureus. Other forms of cocci also are found in this acute suppuration, as the staphylococcus pyogenes albus and Rosenbach's streptococcus pyogenes or pus-generating chain coccus. Whenever colonies of staphylococci or streptococci find their way into tissue, they grow and multiply, and all structures within a certain area become uniformly permeated by them. They coagulate then emulsify and the result is a circumscribed collection of pus with a tendency to spread in the direction of least resistance. In this paper I do not wish to enlarge on the modern theories of inflammation, but in the meantime we will accept the theory that suppuration or pus is formed by uncleanliness.

I mean by uncleanliness, the entrance into human tissue by some of the cocci just spoken of, as some authorities maintain, that if a foreign body is introduced into tissue, it will not cause the formation of pus, except it carries with it infection. Gerster, of the New York polyclinic in aseptic and antiseptic surgery, says: "*Mechanical irritation by foreign substances* imbedded in tissue, such as bullets, splinters of glass, or a broken point of a knife, is also a myth in the old meaning of the phrase *They never cause suppuration unless infectious substances—that is, microbial filth—be adherent to them* at the time of their being deposited in the tissues. They may cause pain by pressure upon nerves, or may interfere with the play of a joint or muscle; but, as a rule, never will cause inflammation or suppuration. Well-disinfected steel nails driven by mallet through femur and tibia after exsection of knee-joint are unhesitatingly left imbedded for thirty or more days, never causing any irritation." I think some of the gentlemen present will bear me out in the fact that very frequently they come across cases where a foreign body is introduced into human tissue without causing the slightest degree of inflammation. For instance, a small sliver of wood introduced into the end of a finger will sometimes cause an intense degree of inflammation, with the formation of a phlegmon. In other cases there is hardly any symptom whatever, except a little pain, probably from the pressure on nerves.

Symptoms. There is generally a history of some injury. If the cellular tissue is the point of infection, there is the most acute tenderness.

Redness is not well marked until the inflammation has reached the surface. Œdema is not well marked at first, but when tension is great there is throbbing pain, especially when the arm hangs down. The thick epithelium of the finger does not allow the pus to escape. Superficially, therefore, it burrows more deeply, and the symptoms become more severe. The phalanx is swollen, and becomes a dark red color, with glazed surface, tense, and most acutely tender. If the tension is not relieved, the pus, being unable to point through the thick cuticle of the finger, becomes diffused through the whole pulp. The areolar tissue sloughs, and, as it is closely connected with the periosteum in this situation, this also perishes, and the bone necroses. When this occurs the finger becomes two or three times its normal size, and presents a large sloughing opening from which large quantities of pus exude. Sometimes the pus finds its way into the sheaths of the flexor tendons, which is a more serious condition, and, if the sheaths of the tendons of the little finger or thumb, which communicate with the general sheath, are affected, there is a great danger of the wrist joint becoming destroyed by acute septic arthritis. When suppuration extends to the common sheath, the most prominent symptom is the red, puffy swelling at the back of the hand, and the palm is generally tense and very tender on pressure; fluctuation may be felt when much pus is found, the fingers are semiflexed, and any attempt to flex them causes great pain. There will be fullness in front of the wrist above the annular ligament, and often there is redness in this region.

Often the constitutional symptoms are quite severe, with febrile disturbance, and, if a large amount of septic matter be absorbed into the blood, symptoms of septic traumatic fever will appear, with light temperature, disturbance of appetite, often delirium, brown tongue, bowels constipated, and sleepless nights.

Treatment. Many text-books still recommend poulticing a phlegmon to bring it to a "head"; and, even now, there are times, when a patient presents to a surgeon, he is told to go home and poultice it. Now, we know that a poultice hastens the process of suppuration by increasing the exudation and migration of corpuscles, but why should we wait until suppuration has advanced to such a degree before we take steps to get rid of it? We must remember that when pus is once formed it will burrow and cause destruction of tissue wherever it comes in contact. Is it not much better to make an incision and let out the pus just as soon as it is diagnosed?

Surgeons of the present day recommend early incision. I think we ought to say the proper treatment of phlegmon should be "early and deep incision." I add the word "deep" for this reason. Supposing the pus

is formed between the periosteum and the bone, and the incision for relief is made only through the cellular tissue, it will easily be seen that pus will not be reached.

The diagnosis of the exact locality of the pus is easily made by the aid of a probe used very gently in the vicinity of the area of suppuration. When the probe comes in contact with tissues which are most acutely tender, we may be sure that pus is present in this spot.

The treatment of a phlegmon at this stage is as follows: After we have satisfied ourselves as to the exact spot where the pus is, a free incision down to the bone is required to relieve tension; the finger should now be submerged in warm bichloride of mercury solution 1 : 2000 for a few minutes, or it should be thoroughly irrigated with this solution.

The wound should be kept open for thirty-six hours with a strip of iodoform gauze, when it should be removed and the finger dressed antiseptically and allowed to heal.

The incision may be made perfectly painless by the use of cocaine. Proceed as follows: Around the root of the finger apply a rubber band tightly; then inject, say, fifteen minims of a four per cent. solution of hydrochlorate of cocaine. The needle of the syringe should be inserted deep into the tissues; now press the piston down and draw the needle backwards a little, but not enough to allow the solution to trickle out from the puncture. If the injection of cocaine is done properly, the patient will not feel the slightest pain when the incision is made.

The treatment of phlegmon when it has extended along the tendons should be conducted on the same plan; but if the case has gone on to extensive suppuration, the patient should be given an anæsthetic, and the limb rendered bloodless by elevation and application of a tourniquet. The incision must be made carefully towards the affected sheath exactly in the middle line on the finger, and the pus evacuated thoroughly. The wound is now irrigated with bichloride solution, a small drainage tube inserted, and dressed antiseptically.

I will not take your time in describing the treatment of neglected cases, or cases where the disease has extended up the forearm. They are to be treated by incision, drainage, and antisepsis.

The object of this paper is to show how important it is to treat rationally, even one drop of pus under the end of a finger, when we know, if it is not attended to properly, irreparable injury might be done, or even a valuable life be lost. I quote from Gerster in saying "there is no region of the human body where senseless poulticing of phlegmons has done more harm, and timely incisions can do more good, than in the palm."

Selected Articles.

INFILTRATION-ANÆSTHESIA AND ITS RELATION TO GENERAL ANÆSTHESIA.

Dr. Cholewa reports the following researches of Dr. Schleich, Berlin, Germany, as follows :

The efforts hitherto made to perform painless operations by means of local anæsthesia have not been very successful. To all the methods of local anæsthesia hitherto employed was opposed a danger in one or another direction. Anæsthesia produced by vaporization of ether, or mixtures of ether, brought with it the danger of gangrene of the frozen tissues, to which was added great pain, especially of the inflamed parts during the freezing, thus considerably diminishing the advantages of the process. The dangers of poison were opposed to the general use of cocaine, that most excellent of all local anæsthetics. To this must be added that the pricking with the Pravaz needle and the act of injection itself, especially into the inflamed parts, was so painful that the procedure was considerably robbed of its value. By the employment of the ether-spray as a preliminary to anæsthesia by means of cocaine injections, I succeeded, to some degree, in avoiding this evil. The surface of the skin above the part to be made anæsthetic became sufficiently insensible by the ether-vaporization to render painless the introduction of the needle. The contents of the syringe entered first into the skin (intracutaneous), and not under the skin (subcutaneous). If I am not mistaken, it was our colleague, H. Schmidt, of Stettin, who first suggested the necessity of these primary intracutaneous injections. I have for many years very frequently performed operations by this species of cocaine anæsthesia, and have reported several cases. Nevertheless, after the application of solutions from 1 to 5 per cent., as soon as a maximum dose of 0.005 cocaine had been reached, frequently even below this point, the most serious symptoms of intoxication have taken place. This occurred even after the application of from two to five small syringefuls, and even when, by previous compression with Esmarch's bandage, the circulation was stopped as long as the nar-

cosis lasted. Medical periodicals are full of reports of cocaine intoxication, a large percentage of which have had a fatal issue. Owing to this state of things, it was impossible that local anæsthesia could successfully compete with "general" narcosis.

I have, therefore, undertaken the task, in a series of trials on myself, on my assistants, and the attendants of my clinic, to settle where precisely lay the limit of the efficacy of cocaine. These and the experiments following, the results of which I had the honor of laying before the Medical Society of Berlin last November (1891), were all performed in such a manner that the real question, whether a given fluid be an anæsthetic one or not, was decided within the intracutaneous limits of the skin. We made the punctures as parallel as possible to the surface of the skin immediately under the papillæ, until a white and slightly elevated blotch rose, resembling the sting of a gnat. The reason that the investigations of this subject, so carefully made by Liebreich and his pupils, as well as by Levin and Kanewsky, did not immediately lead to the discovery of any new facts was that the aforesaid authors applied the fluid under examination *subcutaneously*.

We tried these experiments first on ourselves; those authors experimented chiefly on the skin or the mucous membrane of animals. During these "intracutaneous" trials of the various solutions of cocaine, first appeared the surprising fact that solutions of 1-5000 in water were able, within the limits of the infiltration, to produce a complete anæsthesia, so that punctures, cutting, scratching, and scraping could be done absolutely without pain. Henceforth this fact may be justly considered as indisputable, after my having proved it in several hundreds of operations. After the discovery of this fact it was a natural inference that the cocaine could be altogether left out of the fluid, and the same results were obtainable with pure water and solutions of salt. We found, indeed, that pure distilled water is able to produce perfectly anæsthetic blotches. But here an essential difference appeared, namely, the process of injecting water into the substance of the skin itself with the formation of water blotches is painful, and that to no slight degree. Not until from a half to a minute after the injection does pure anæsthesia take place, and then is quite as perfect as after the injection of cocaine of from 1-5000, or in stronger solutions. The result was that distilled water, according to the meaning of Liebreich, is an "anæsthesia dolorosa"; that is, the commencement of anæsthesia (the paralysis of the nervous substance) is preceded by a stage of pain, a hyperæsthesia of the nerves. This hyperæsthesia was an obstacle to the use of pure water for operating purposes, although the refrigerating of the water to zero (Cels.), as well as the use of the ether-spray, employed in the above-mentioned way, reduced this stage of irritation to a minimum, so

that I was several times enabled to perform with pure distilled water such operations as opening furuncles or carbuncles, removal of small ganglia, etc.

Further experiments revealed that a number of substances were practically available as anæsthetics without producing irritation. First, as strong a solution of common salt as 0.6 per cent. produces no anæsthetic effects worth mentioning. On the contrary, it was found that a further diluted solution of common salt, namely, a 0.2 per cent. solution, by itself, especially in lower degrees of temperature, produces a perfectly prompt anæsthesia in the region of the infiltration. I may here, perhaps, remark that what is true of the skin also refers to other tissues of the body; for instance, to the subcutaneous layers, the muscular layers, and the periosteum. The 0.2 per cent. solution of common salt produces not only anæsthesia, an effect which it possesses in common with water, but the process of injection is painless. This proves that it is the infiltration itself that produces the anæsthesia.

The anæsthetizing fluid need not be itself anæsthetic. The proportion of common salt in a solution is important, as witness the following experiment: The smallest effective dose of cocaine—weaker injections caused pain—was 0.2-100, or 1-5000. This watery solution of cocaine produces anæsthesia and makes other injections painless. The same dose of cocaine containing 0.6 per cent. of common salt is painful and is not able to produce anæsthesia, while the same solution wherein the amount of common salt is not greater than 0.2 per cent. again affords perfect anæsthesia; indeed one gramme of cocaine in ten litres of a 0.2 per cent. solution of common salt is capable of producing complete anæsthesia, or, in other words, I may use half a litre of my anæsthetic solution before the maximum dose of 0.05 cocaine is reached.

Now, when you consider that for most operations, as, for example, the amputation of the breast, about fifty to eighty grammes of the solution are employed, you will agree with me that there can be absolutely no question of danger of poisoning from this method of anæsthesia, especially as the dose is never administered all at once, but is extended over the time occupied by the whole operation. If I may be permitted to suggest a theory to explain the incontestable fact of anæsthesia by the thoroughly penetrating infiltration of "indifferent" fluids, I must not omit to say that cocaine, common salt, and water are not the only materials that are able in this way to produce anæsthesia. You will obtain as complete a state of anæsthesia by using a solution of 3 per cent. sugar, or of 0.1 per cent. morphia, or of 3 per cent. potassic bromide, or of 1 per cent. methyl-violet, or of 2 per cent. caffein, and so on. I may mention that the efficacy of all these materials, to which may certainly be added a great many

others, will be increased by dissolving them, not in water, but in a 0.2 per cent. solution of common salt.

How is this fact to be explained? I assume that the physiologic solution of common salt of 0.6 per cent. on account of its similarity with the composition of blood serum is highly irritating when presented in excess to the sensitive nervous tissues.

Water, on the other hand, is sufficiently different with respect to the lining tissues, and its normal fluid to modify the nervous substance; it first produces irritation, and afterwards paralysis of the nerves and anæsthesia. I surmised that between these two effects, the indifferent one of the 0.6 per cent. solution of common salt and of the distilled water (differing from the composition of the fluid of the lining tissues), there must be a territory within which a weaker solution of common salt would be able to produce anæsthesia without the irritation to nervous tissues resulting from the use of both stronger and weaker solutions. This border land was found in a 0.2 per cent. solution of common salt in distilled water. This is the very anæsthetic fluid which I employ in my operations; the addition of 1 gramme of cocaine to 10,000 or 5,000 grammes of this solution facilitates the practical application of the solution without entailing even a shadow of danger. One gramme of this solution contains only 0.0001, that is a tenth of a milligramme, of cocaine. The maximum dose of cocaine is not reached till 500 grammes of the solution have been used. It must be remembered, also, that during the operation more than half of the fluid employed runs out again or is wiped off.

In minor operations I make use of a solution of 1-5000 grammes, and for dressings recommend the employment of a solution from 1-1000 grammes.

I advise two "stock" solutions: One of 1 gramme of cocaine to a 1000 grammes of water (Solution A), and the second of 2 grammes of common salt to a 1000 of water (Solution B). Parts of solution A are mixed for use with five or ten times as much of fluid B. Both fluids are easily sterilized.

The cause of anæsthesia by infiltration is not a simple one; several factors are at work; first, the pressure of the injected fluid and the removal of the blood from the infiltrated tissues. After a properly performed injection, they appear perfectly white. That is, instead of the tissue juices the foreign mixture is incorporated in all the lymph vessels and the areolar spaces, while the blood is gradually forced into the neighboring vessels. But besides this pressure and anæmia of the tissues, temperature plays a prominent part. The proof of this is very simple. All my solutions of common salt of from 1-1000 to 10,000 have the best effect at zero, Celsius.

Every œdema of the skin would produce anæsthesia of the parts, every swollen limb would become insensible, did not the injected fluid, which causes this pathologic œdema, contain the same amount of common salt (0.6 per cent.) as the serum of the nervous fluid. If one produces an artificial œdema with other fluids—with or without a little common salt—the whole region of the artificial swelling will become insensible and will enable one to operate without causing pain. This is briefly the principle of infiltration-anæsthesia, which in practice has gained such a widespread application. This proceeding is, in the first place, beneficent to the patient, for whom the danger of the operation is diminished in the same degree as we are able to spare him the general narcosis.

The danger of an operation, in so far as loss of blood is concerned, scarcely exists, thanks to the advanced progress of our operative technique, for which we are indebted chiefly to our great masters of the pre-antiseptic era, and not the least to him whose immortal name has been given to this house. Lister has enabled us to make the dangers of infection depend upon our sense of duty and our carefulness; the danger of poisoning by the use of antiseptics we have banished by our efforts to reveal the laws of asepsis. What remains, then, to be done? To diminish the dangers of narcosis. What is wanted is sufficiently shown by the ever recurring recommendation of new and improved inhalation-anæsthetics, such as ether, ethyl-bromide, penthal, etc. Among these, local anæsthesia claims the first rank.

For operations of medium importance, in which I include simple uncomplicated laparotomy without extensive adhesions, amputations of the breast, and removal of large tumors from other situations, there can now be no question of the efficacy of infiltration-anæsthesia. It will be the task of the future to render this matter of proceeding, in principle unassailable, practical for surgical purposes in still more serious and extensive operations. I have so far operated upon 521 patients painlessly and without a sign of danger. Among these I might mention such operations as nephrotomy, herniotomy, removal of sequestra, amputations of the mammæ, removing glands from axilla, and laparotomies. It must never be forgotten that chloroform narcosis increases the danger of the operation. This danger is incalculable. Even the most circumstantial statistics can not tell us anything definite as to whether the danger be great or small for the individual. But how many dangerous cases of asphyxia of this or that kind, even of the deaths happening hours or days after the use of chloroform come to our knowledge, but are never in our statistics!

“General narcosis” is not the ideal method for the patient or for the physician; if I operate upon one part, why should I deprive the individual wholly of his consciousness and force him to give himself helplessly

into my hands? especially if, as frequently happens, I am obliged to deprive him of consciousness, not in the form of a quiet, delightful sleep, but too often only after a struggle followed by anxiety about the eventful danger of the narcosis.

Of 537 operations, I have used chloroform in only 16 instances, and then in cases where an especial exigency demanded it, as, for instance, insurmountable fear, hysteria, the personally expressed wish of the patient, and failure of local anæsthesia.

I now consider myself no longer justified in making use of general narcosis in my operations, unless the method of infiltration-anæsthesia has been previously tried. To perform operations under chloroform or other narcosis, when they are certainly practicable with one or other form of local anæsthesia, I must, from the standpoint of humanity, denounce as absolutely unjustifiable.—*The Journal of the American Medical Association.*

CHRONIC PROSTATITIS AFTER GONORRHOEA.*

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I. CLINICAL PATHOLOGY.

WE desire to call your attention to a new method of examination and treatment for a certain form of prostatitis, which is very often found as a sequela of a prolonged and severe posterior urethritis.

Our knowledge of the pathology of specific urethritis has increased more during the past ten—or even five—years than on any other subject in medical science. All our ideas upon the etiology, pathology, and treatment of this affection have entirely changed through the successful bacteriologic researches of the last few years. Further, we have learned to diagnose all possible complications of gonorrhœa since rare culture methods of the specific micro-organisms, the gonococcus Neisser, have been made on modified blood serum by Brunner and Wertheim.

The difficulty connected with the study of this micro-organism has always been, and is at present, to ascertain the presence of gonococci in all the organs secondarily affected by the specific malady. We are still in want of an easy method of demonstrating the gonococci and differentiating them from non-infectious diplococci. But the rapid progress made by continued bacteriologic investigations upon the features of this micro-organism will, in the near future, surely solve this question. Every physician will then be able to give a decided opinion on the possible danger of infection after gonorrhœa just as easily as, for instance, in tuberculosis, by finding the tubercle bacilli.

Comparing both constitutional affections—tuberculosis and gonorrhœa—we are fully justified in stating that, as important as it is for the patient himself and his possible cure to find the specific micro-organism in tuberculosis, it is just as important to demonstrate successfully the diploe gonococcus Neisser after a prolonged chronic gonorrhœa, on account of the possible danger of infection an individual might have for others. It is

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evident that, by our present methods of examination, it is often impossible to state whether a chronic posterior urethritis has entirely died out or not. Experienced gynæcologists coincide in the statement that, in cases of posterior urethritis where, by objective examination, nothing could be found, and, as subjective symptoms existed, the female genital apparatus was very heavily infected. It is worthy of note that Zweifel says, in his latest work upon gynæcology: "This disease (or chronic urethritis) has a strictly social danger, and wives and families even were then syphilitic, for it produced zoospermia and sterility in males, and sterility and general debility in females."

You will readily coincide with me that every contribution which throws more light upon the question, at what time a chronic posterior urethritis can be considered as cured, or is no longer infectious, must be gratefully received by the medical profession.

While in Europe last year, Dr. Posner, of Berlin, told me that, in his opinion, the infection in cases of posterior urethritis apparently cured might be produced by the secretion of the diseased prostate gland, which is pressed out at the moment of ejaculation. In an important contribution upon this subject this same author called our attention to the fact that by examining the prostatic secretion much benefit might be derived as regards an exact diagnosis in obscure cases of posterior urethritis. Where, by digital palpation of the gland and microscopic examination of its secretion, a chronic inflammatory condition of this organ could be ascertained, this chronic prostatitis was, in his opinion, in almost all cases, complicated with an insufficient action of the ejaculatory ducts, or even with chronic spermatocystitis. The anatomic basis for Posner's suggestions was given, a few years later, by Finger, of Vienna. In a number of cadavers where the prostatic portion of the urethra showed chronic gonorrhoeal affections, he found the glands of the prostate the seat of periglandular as well as endoglandular infiltration. Very interesting is the fact that, in a considerable percentage of cases thus examined, passive pathologic conditions of the ejaculatory ducts could be found, namely, an obstruction of the ducts by an invasion of round cells. To such conditions, apparently, ejaculation is difficult or prevented.

We, therefore, have sufficient reason to believe that the residue of chronic gonorrhoea lies here. It is evident that, by the insufficient action of the ejaculatory ducts, as well as by the cardoglandular infiltration of the prostate, infectious material is retained in the deeper appendages of the posterior urethra.

Lately v. Schlen, almost simultaneously with myself, has utilized the investigations of the authors above mentioned to devise a new method of examination, by which positive results may be obtained where our previous

methods failed to furnish any infectious material. Let the patient urinate, at first, in two portions, keeping a portion of urine in his bladder. As a rule, these first two portions appeared to be almost void of threads, pus, etc. Then the prostate gland is forced out from the rectum, and immediately afterwards the fluid and last portion of the urine is voided, which was uniformly cloudy, containing abundant material of an infectious character.

In palpating the prostate of many cases suffering from chronic posterior urethritis for this purpose, I could ascertain the fact that in a large percentage this organ was rather enlarged, of unequal consistence, and often painful to the touch. None of these patients complained of any of those symptoms generally ascribed to a subacute or chronic form of prostatitis. I am inclined to think that this condition of the prostate must be considered as an extension of the gonorrhœal infection from the posterior urethra to the prostate gland and the peri-prostatic tissue. The deeper the inflammation extends, the more it loses its violent character. If these glandular organs are once infected, those remedies which will readily remove the infection from the urethral canal will certainly not influence the morbid condition of these organs, owing to their anatomic structure and the insufficient action of the ejaculatory ducts.

I therefore concluded, with the valuable aid of Dr. Spencer, to systematically examine our entire clinical material of cases of posterior urethritis to ascertain what rôle the prostate gland plays in the infectious process. In order to exclude possible errors in drawing conclusions from our investigations we have, at the same time, examined a number of persons who never had suffered from gonorrhœa. In all cases the prostatic secretion was acquired by pressing open the gland from the rectum; the fluid was then examined microscopically and bacteriologically by Dr. Spencer, who will give you his report in addition to mine, and will illustrate the importance of our investigations through some excellent drawings.

As I proceeded in my investigations, I began to utilize his method of pressing out the prostatic secretion for therapeutic purposes. At first, in a number of cases, the palpation of the prostate was quite painful. Later, all tenderness gradually disappeared. I therefore combined with my diagnostic object, in pressing out the prostatic secretion, a systematic massage of the gland, and could very soon macroscopically, as well (in the appearance of the fluid) as microscopically (in the gradual disappearance of pus cells), notice a decided improvement. At the same time, in those cases which presented subjective symptoms, the symptoms gradually disappeared under the beneficial influence of the massage.

One case will illustrate the satisfactory results obtained by this method :

Patient, C., æt. 29, consulted me early last winter. He had suffered from repeated attacks of gonorrhœa, a slight discharge having been present

for the last two or three years. In the last eight months he had been under very able treatment in New York, as well as here, with the result that all discharges had disappeared and no other symptoms were present. As he intended to marry shortly, he wished to satisfy his mind upon the possible danger of infecting his future wife. In this case the two-glass method gave a negative result, both portions being absolutely normal. In palpating the prostate from the rectum it was found slightly enlarged, and the left lobe was very painful to the touch. The microscopic examination of the prostatic secretion showed an abundance of pus cells. The third urine portion, voided after the expression of the prostate, was cloudy, and contained several threads, in which there were found gonococci. I advised the patient to postpone the wedding, which he did. Meanwhile I treated him with systematic massage of the prostate, with the very satisfactory result that after two months all threads had disappeared, while the prostate appeared to be normal in every way. His wife is perfectly healthy up to date.

Since then I have treated several other cases similarly, and desire to mention particularly one case in which we both (Dr. Spencer and myself), after each expression of the prostate, made a careful microscopic and bacteriologic examination of the prostatic secretion. Here the gradual decrease of pus cells was accompanied with the disappearance of subjective and objective symptoms. In another case I have to report that the improvement is only very slight up to date. Undoubtedly this method will fail to give satisfactory results where the prostatitis is complicated with a severe chronic spermato-cystitis.

Our material has not been large enough, at present, from which to draw absolutely certain conclusions. Even in the limited number of normal cases we could obtain for our purposes we could occasionally notice an invasion of round cells, indicating a congested condition of the prostate. This was, in one case, most decidedly due to a hyper-irritation of the genital apparatus by masturbation. The positive value of our investigations still lacks the presence of gonococci in the prostatic secretion of any of our cases. Dr. Spencer will give you his reasons why the absence of gonococci in the prostatic secretion does not prove the absence of an infectious condition of the gland. Still, I am ready to confess that the positive proof of a gonorrhœal prostatic can only be obtained by the presence of the gonococci.

From our preliminary investigations—we intend to publish the result of our future studies upon this subject at a later date—I am convinced that much harm to the female genital apparatus will be avoided if any man having suffered from chronic gonorrhœa is examined in regard to his prostatic secretion before marriage. No patient who has suffered from

chronic posterior urethritis can be pronounced as cured without an examination of his prostatic secretion. The best treatment, if no after symptoms of posterior urethritis are present, will be the systematic massage of the prostate. If symptoms of post-urethritis are still present, the massage of the prostate might be combined with a local treatment of the posterior urethra.

II. ITS MICROSCOPIC AND BACTERIOLOGIC ASPECTS.

As an indispensable adjunct to the rational therapeutics of chronic prostatitis, we must consider the microscopic phases of this affection. Owing to the limited time and material at our disposal, our observations are necessarily incomplete. Such as they are, however, they are of the greatest interest to the urologist and importance to the patient. Owing to more or less imperfect diagnostic methods, the knowledge of the actual condition of the prostate gland has been left largely to chance. Reliance has been placed principally upon the subjective symptoms of the patient and the very meagre objective symptoms which he presented. By the aid of the comparatively simple method of expression of the contents of the prostatic follicles, as outlined by my colleague, Dr. Krotoszyner, and by a microscopic examination of the expressed fluid, a great flood of light is thrown upon the actual conditions present.

The literature upon this important subject, up to the present, is exceedingly scanty. Fürbringer, of Berlin, may be regarded as the pioneer in the use of improved direct diagnostic methods of ascertaining the exact condition of the diseased prostate. A notable contribution is that by Finger, of Vienna, in the *Archives of Dermatology and Syphilis*, in 1893, afterward incorporated in the last edition of his work on "Blenorrhœa of the Sexual Organs." As my colleague, Dr. Krotoszyner, also refers extensively to this work, I will confine myself solely to the microscopic features. He examined the prostates of patients known to have had posterior urethritis during life, but who died of intercurrent diseases. He found a number of cases in which the gland follicles were filled with desquamated epithelial cells. In such, during life, the prostatic secretion had shown nothing beyond a striking increase in the number of epithelia. In another group of cases examined in a similar manner, beside the desquamated epithelia, he found numbers of polynuclear leucocytes completely filling the gland tubules. In these cases, during life, the expressed prostatic secretion showed large numbers of pus cells in addition to the epithelia. Neither set of cases presented any subjective symptoms as affecting the prostate.

The last article on this subject appeared in the *Berliner Klinische Wochenschrift*, May 21, 1894, by Dr. Tonton, of Wiesbaden, entitled, "The Gonococcus and its Relation to Blenorrhœic Processes." Among

other matters, he writes "that he believes in the possibility of a continuance of chronic inflammatory processes (in the genital tract) without the presence of gonococci." He further believes it reasonable to assume that the vascular lesion caused by the virus may outlast the virus itself, and be the cause of continued exudation. An extension of the process is due to the presence of the virus itself.

In order to make comparisons which should be the more striking, we have expressed the prostatic secretions of a number of normal cases, who have never had a gonorrhœa or any known inflammatory lesion of the genital tract. For present purposes it will suffice to describe the microscopic findings in three cases :

CASE 1. *Æt.* 19 years. Fluid expressed shows immense numbers of lecithin granules. Of these the majority are very minute in size ; many are larger, approximating in size a red blood cell. They are perfectly circular in shape, and present a uniform hyaline appearance. The majority lie free in the fluid or may lie on an epithelium, or corpus amylaceum.

There were numbers of medium-sized cells, presenting, for the most part, a densely granular structure, and containing several glistening bodies which were undoubtedly oil globules from a beginning fatty degeneration. The majority of these were simply granular.

There were modern numbers of cylindrical epithelial cells from the gland follicles of the prostate. These presented a characteristic appearance of a long spindle-shaped cell body terminating in a long stem-like process. In certain cases this process branched at its extremity and formed two rootlets, as it were. Each cell contained a large oval nucleus, and was granular. There were a very few cells with one nucleus, which we regard as lymphocytes, and of no pathogenic significance.

There were a few motionless zoosperms scattered about.

CASE 2. *Normal prostate.* H.S., *æt.* 19 years. Fluid appeared in rather unusual amount for one of his age, at the meatus. Upon microscopic examination, there appeared numerous lecithin bodies as described in the previous case. A moderate number of medium-sized cells, presenting the granular appearance before referred to, and also evidences of beginning fatty degeneration ; corp. amylacea ; a very few scattering cells, with one nucleus, which we regarded as lymphocytes ; a number of the characteristic cylindrical epithelia ; a few zoosperms.

CASE 3. H.H., *æt.* 24 years. Never had gonorrhœa. Abundant lecithin bodies ; abundant granular cells, with a few showing fatty degeneration ; lymphocytes ; cylindrical epithelia, and corpora amylacea.

CASE 4. S., *æt.* 33 years. Although we have examined several cases of chronic prostatitis, this case will stand as a type in lieu of a detailed description of the others. The case has been under treatment for nearly

six weeks. The fluid at first expressed contained an abundance of dense flocculent masses, which, upon examination, proved to be closely packed masses of pus cells. At the beginning the expressions were carried out about twice a week, and subsequently once a week. A striking feature of the fluid was the unusually large cells, which had undergone granular and fatty degeneration. These occurred in groups. There were also the numerous lecithin granules, as in normal cases; cylindrical epithelia, and a few zoosperms. With each succeeding expression, the diminution in the number and arrangement of the pus cells was very marked. After the second or third expression and instillation of silver nitrate solution, the pus cells ceased to appear arranged in the dense groups as at first. They became progressively more scanty and scattered through each field of the microscope. Finally, they were so reduced in number as to give evidence that the process had come to a close. A similar course obtained in the behavior of the pus cells in the other cases examined.

The corpora amylacea showed the structure of concentric laminæ, and more or less well-marked cleavage as one might be led to expect in crystalline structures. There were also a number of more or less cylindrical-shaped bodies, which consisted evidently of hyaline casts of the prostatic follicle, as described by Paget, Clark, and Fürbringer. In this case there were large numbers of isolated pus cells. Many cylindrical epithelia as in the normal cases. Abundant lecithin granules. A few zoosperms.

CASE 5. S., æt. 43 years. Fluid contained an abundance of flocculent threads. Upon microscopic examination, these threads were found to consist exclusively of pus cells grouped in masses held together by a scanty amount of mucus. In this case there were numbers of corpora amylacea, fatty and granular cells, lecithin granules and epithelia, as in the previous case.

CASE 6. R., æt. 24 years. This case presented features resembling those of the previous case. The fluid expressed contained numerous shreddy floccules which consisted of densely-grouped masses of pus cells, corpora amylacea, epithelia, and zoosperms.

The importance of our diagnostic methods is well illustrated in Case 6. After apparent subsidence of all of the symptoms and physical signs of urethritis, an expression of the prostatic contents revealed the presence of an abundance of pus cells in the characteristic manner, thus necessitating still further treatment.

From our observation we have concluded that, in the normal cases, the large cells seem uniformly smaller, and showed less of a tendency to fatty degeneration than in the cases of the maturer and infected cases. From this we are led to the deduction that these bodies do not reach the large size, and show evidences of fatty degeneration, in young persons

whose sexual functions are yet in a more or less dormant state. In cases in which the sexual function was already somewhat active, we observed an increase in the number of lymphocytes. While this increase may hardly be said to assume the importance of indicating some pathologic change in the prostate itself, yet we regarded it as evidence of a functional over-activity. It is interesting to observe that upon a subsequent attempt to obtain fluid from this case the fluid was distinctly sanguinolent, and, upon examination, proved to contain large numbers of red blood cells. Upon questioning the patient we found that he had indulged freely in sexual pleasures on the day preceding our expression. Through this indulgence the prostate became undoubtedly hyperæmic, and, owing to the presence of round cells, showed a condition of irritability.

As regards the presence of the above-mentioned hyaline casts, we agree with others that they seem to occur toward the close of a desquamative prostatitis, as verified by our own experience. In order to exclude all doubt as to the nature of these bodies which we have regarded as pus cells and lymphocytes, we treated them with a 20 per cent. solution of acetic acid. Upon clearing, the pus cells were found to be uniformly polynuclear, and the lymphocytes mononuclear. According to certain authors, there are mononuclear pus cells, but Ziegler's "Pathology" in the last German edition says: "Among the cells emigrating from the circulatory system, two forms may be distinguished, viz., mono- and polynuclear, and the term pus cell refers to the polynuclear forms."

Fürbringer, in his classical work, "Die Inneren Krankheiten der Harn u. Geschlechtsorgane," edition 1890, states, that pus cells may appear plentifully in prostatic secretion as a result of a catarrh confined to one gland follicle, and not of the entire organ. Under all circumstances, the finding of the large and beautiful Botcher crystals determines the secretory involvement of the prostate. The addition of a drop of one per cent. solution of ammonium phosphate to a drop of the expressed fluid on a slide should show these crystals after the lapse of an hour. Further, he says: "It must be admitted that these crystals may not be found in true prostatorrhœa, because of extensive chemic changes in the gland secretion, especially in those forms tending to form necrotic areas and abscesses, also because of the admixture of urine." But the failure of this reaction by no means weakens the proof in the positive results afforded by their presence.

We have endeavored to demonstrate the presence of these crystals in each of our cases, according to the method indicated, but as yet without success, perhaps owing to the obstacles mentioned. Likewise, in each case we have searched through many specimens for gonococci in the pus cells of the expressed secretions, but without success. Undoubtedly, with

the advantage to be derived from examination of greater clinical material, our efforts in this direction should be successful.

Our method of staining for gonococci is one which has given us beautifully clear pictures, and generally brilliant results. It is that recommended by Lanz in No. 9 of the *Deutsche Medicinische Wochenschrift* of this year. Briefly, it is as follows: Spread on the cover glass, dry and fix in the usual manner, being particularly careful not to overheat in fixing. Immerse from one-half to one minute in a 25 per cent. solution of trichloroacetic acid. Wash, dry, and fix again. Then immerse for about five minutes in a solution of thirty c.c. of distilled water, to which add enough of a saturated aqueous solution of methyl blue to give a deep blue tint, and one or two drops of a 5 per cent. solution of caustic potash. The gonococci will appear a deep blue, and the rest of the cells a lighter blue. A double stain may be produced by immersing the cover glasses for a few minutes in a dilute solution of Bismarck brown. The cell protoplasm will take on a greenish or brownish hue, while the gonococci will remain unchanged. As a negative criterion in cases in which all other methods of determining the presence of gonococci fail, cultures may be made. They grow only on such media as blood serum, serum agar, or blood agar, in the form of minute dewdrop-like colonies. It is a distinguishing characteristic of gonococci that they do not grow on plain nutrient gelatin or agar.

In conclusion, we must express our regret that our limited time and clinical material have not enabled us to give you more extensive results, but we trust that the little we have presented will serve as a stimulant to our colleagues to devote more time and painstaking methods to the examination and treatment of this hitherto somewhat unsatisfactory class of cases. If by definitely excluding all possibility of infection after an attack of specific urethritis we may lessen the misery entailed on young wives through innocent contact with husbands pronounced free from infectious possibilities by their medical advisers, we may feel some degree of satisfaction; if in no other way, at least by curtailing some of the work of the gynecologists.—*The Journal of the American Medical Association.*

Progress of Medicine.

MEDICINE

IN CHARGE OF

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A PREMONITORY SIGN OF PULMONARY TUBERCULOSIS.

M. Destrée, of Brussels, at the Medical Congress in Rome, stated that unequal dilatation of the pupils was frequently to be observed in tuberculosis. If the disease was unilateral, the pupil was most dilated on the affected side; if bilateral, the dilatation was variable. This inequality of pupils is not observed in other diseases of the lungs (bronchitis, emphysema, pneumonia), but may follow an ancient pleurisy. This inequality is produced by excitation of the great sympathetic in the thorax of animals. Excitation of the hilum of the lung causes pupillary dilatation of the same side. This excitation is to be observed clinically in cases of tuberculous glands. The ganglia being altered and hypertrophied before the tuberculous lesions of the lungs are notably developed, mydriasis may occur early and form a sign, a warning. The author has observed this mydriasis five years before the pulmonary affection manifested itself in one case. He calls attention to the possibility of its being of value in the early diagnosis of pulmonary phthisis.—*Universal Medical Journal*.

"THE DISEASES OF OLD AGE."

Dr. E. B. Montgomery, Quincy, Ill., summarizes his observations in the following conclusions in a paper read before the Illinois State Medical Society:

(1) There are no diseases that are a necessary result of mere length of life ; in other words, that old age is not of necessity pathologic.

(2) That diseases of a degenerative nature, occurring in the aged, most frequently, are those most distinctive of the decline of life.

(3) That such diseases are either due to faulty heredity, overwork, errors in food and drink, or constitutional dyscrasiæ, than from any necessary wear and tear of the vital mechanism, the result of long life.

(4) As a corollary of this, the prophylaxis of such diseases consists in a good heredity and a well-ordered life, especially the avoidance of syphilis and alcoholism.

(5) That their treatment consists largely in proper personal hygiene and the treatment of the constitutional dyscrasiæ upon which such degenerations so frequently depend.—*The Journal of the American Medical Association.*

REFLEX SPASM OF THE TONGUE, LIPS, AND PHARYNX INDUCED BY IRRITATION OF THE GREAT OCCIPITAL NERVE.

Gallerani and Pacinotti (*Neurol. Centralblatt*, 1893, No. 14 ; *Centralblatt f. d. med. Wiss.*, 1894, No. 19, p. 335) have reported the case of a man who had been struck upon the head twelve years previously. The site of injury was from time to time the seat of pain, both spontaneous and induced. In the stellate cicatrix a small, round, hard body could be felt, pressure upon which induced pain. There was present contracture of the muscles of the left side of the neck, so that the head was held downward and directed to the left, and there was also disturbance of speech, contraction of the lips, slight trismus, and some difficulty in swallowing. The spasmodic condition was a result of irritation induced by the presence of the foreign body, and disappeared after excision of the cicatrix at the point of union of the great and small occipital nerves.

THE SEAT OF THE FORMATION OF UREA IN THE ANIMAL ORGANISM.

As the result of personal investigation and from existing data, Kaufmann (*Archives de Physiologie normale et Pathologique*, 1894, No. 3, p. 531) reaches the conclusion that urea exists in all of the tissues of the mammalian organism, and in greater proportion than in the blood. All of the tissues seem to take part in the production of urea, although in varying degree. The liver is the most active seat of urea-formation. The production of urea seems due to processes of denutrition that take place in various tissues, and results especially from the work performed by the liver.

THERAPEUTICS

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LOCAL ANÆSTHESIA BY HYPODERMIC REFRIGERATION.

Dr. Letang (*Rev. de Therap.*) gives the technique of this method as follows: Place a test tube filled with salt water (in which are plunged a thermometer, and a syringe filled with the same liquid) in a freezing mixture consisting of eight parts of sulphate of soda and five parts of hydrochloric acid. When the thermometer shows a temperature of ten degrees above zero, remove the filled syringe and make the injection. In place of salt water, the following may be used:

Distilled water	
Neutral glycerine	- aa 100 parts.
Sulphuric ether	- - 2 "

DIGESTION WITHOUT DIGESTIVE FERMENTS.

(Dastre: *Arch. de Phys.*, 1894.) Fibrin, in the presence of a neutral saline solution (sodium fluorate, two per cent. ; sodium chloride, fifteen per cent.), is not only dissolved, as formerly believed, but undergoes a form of digestion. Three different substances can be found in the solution: One, strictly speaking, dissolved fibrin ; the second shows the globulin reaction (coagulable at 75° to 84°) ; a third made up of peptones. The same to be observed with albumin and casein. Thus the digestive process can be brought about by mere contact with a salt solution. Examples of such transformation were certainly known before, by the action of physico-chemical substances, but the conditions were much more vigorous: the amylolytic effect of diastase ; the inversive effect of yeast juice by acids acting with heat ; the formation of peptones from albumin-

oids in acidulated water, by heating to 180° C. The process pointed out by the author takes place under natural conditions (mild ones). In both cases the provoking material remains unchanged.—*Revue Internat. de Bibliographie Med.*

PARAFORMALDEHYDE ($\text{CH}_2 \text{O}$).

This substance is formed by union of three molecules of formic aldehyde ($\text{CH}_2 \text{O}$). It is a white, indistinctly crystalline mass, almost insoluble in water. It can be administered internally in large doses—seventy-five grains per diem—without bad effects. As an internal antiseptic medicament it has been found superior to iodoform, B. naphthol, salol, naphthalem, and bismuth salts. Its antiseptic properties probably depend upon the elimination of formic aldehyde vapor, which has been found to be an intensely active antiseptic. Paraformaldehyde has been very useful in infantile cholera, and, no doubt, will be found as effective in typhoid, typhus, etc.

A NEW METHOD OF USING COCAINE FOR LOCAL ANÆSTHESIA.

Krogius (*Centralbl. f. Chir.*) describes a new method of producing cocaine analgesia, which is based on the fact that when a solution of this agent is injected into the subcutaneous tissue, near to a nerve trunk, it causes loss of sensation over a large zone corresponding to the peripheral distribution of this nerve. In order to reach the selected nerve trunk with certainty, and to apply the cocaine to several of its branches at the same time, the author, in injecting the subcutaneous tissue, passes his needle across the long axis of the limb, and, as the needle is thrust along, the solution is gradually discharged. An injection made in this way across the root of a finger will, in the course of ten minutes, result in analgesia of the whole digit, not of the skin only, but also of the tendons, the periosteum, and all the deep structures. If one or two injections be made transversely, near the wrist, a considerable extent of the palm of the hand may be thus rendered analgesic. The sensibility of the ulnar side of the hand, as far as the roots of the last two fingers, may, it is stated, be abolished by injecting a solution of cocaine over the ulnar nerve at the back of the elbow. By injecting over both supraorbital notches analgesia may be produced in the whole of the middle portion of the forehead. The analgesia caused by this method of using cocaine attains its greatest intensity from five to ten minutes after the injection, and is maintained for a quarter of an hour or even longer. The author injects only a weak (two per cent.) solution of cocaine, and keeps the patient recumbent for at least a quarter of an hour after the operation. This method has been

practised with success at Helsingfors in two hundred minor operations, such as amputation of the fingers and toes, excision of palmar fascia and phimosis.—*The Times and Register*.

SOMATOSE.

This substance, which has received considerable attention of late, consists of albuminous substances which have already been digested, and is, therefore, readily assimilated, and, in its own form, replaces the albumin of the body. It is a yellowish powder, tasteless, and soluble in water. It has been found particularly useful in phthisis, chronic gastritis, etc. It may be given with soup, milk, and cocoa.

DIPHTHERIA: ANTITOXINE.

The dose, as calculated from experiments on guinea pigs, has been found too small; 2 c.c., in place of 1 c.c., of the solution should be injected into children above the age of four years in order to secure immunity. The injections are made deeply into the subcutaneous tissues behind the shoulders.

QUININE IN WHOOPING COUGH.

Dr. Barou (*Bul. de Therap.*) gives a report of fifty cases treated with quinine. The doses ranged from 1 to 40 centigrammes ($\frac{1}{8}$ to 6 grs.) three times a day, according to the age of the patient. The disease, in a few cases, was aborted, while the average deviation did not exceed three weeks. The drug was found particularly useful in whooping cough complicated by lung affections.

A GOOD NUTRIENT ENEMA.

R.—Egg, one.
Fresh milk, ℥iv.
Pancreatic solution, ℥ii.
Sodium bicarbonate, gr. xx.
Hot water, ℥ii.

Switch the egg and milk thoroughly together, add the pancreatic solution and bicarbonate of sodium, then the hot water, and let stand in a warm place for half an hour. A little brandy or wine may be added, if desired. The addition of a few drops of laudanum frequently assists in the retention of the enema.—*Medical Press and Circular*.

ACCIDENTS FROM SALOL.

M. Josias, in *Journal des Practiciens*, reports an instance where the administration of fifteen grains, followed by thirty grains on the next day, gave rise to a scarlatiniform erythema, with spots resembling measles, and red papules. The urine showed the presence of both phenic and salicylic acids. Dujardin-Beaumetz believed that one cause for these symptoms was to be found in the renal impermeability which is set up by the ingestion of aromatics, as phenol. Bardet has found that in febrile conditions the aromatics act as antithermics, and chilling, cyanosis, and rashes are not uncommon; therefore, in these cases care should be exercised, while in non-febrile cases accidents do not occur, even if the doses are large. A proof of this is found in the administration of large doses in dyspepsia. Jasiewicz, from his own experience, could not admit the absorption of this drug when used as a topical application, even in large doses.—*American Journal of the Medical Sciences*.

ARTIFICIAL SERUM FOR HYPODERMIC INJECTION AFTER SEVERE SURGICAL HÆMORRHAGE.

According to *L'Union Médicale*, Cheron recommends the following mixture for injections under these circumstances:

R.—Sulphate of sodium.....	3ii.
Phosphate of sodium.....	3i.
Chloride of sodium.....	gr. xxx.
Pure carbolic acid....	mxv.
Sterilized distilled water.....	3xxvi.

The inside of the thighs, the abdominal wall, or loose tissues of the back are the proper points for these injections to be made.—*Therapeutic Gazette*.

TREATMENT OF DIABETIC COMA.

Dr. Harley (London *Lancet*) contributes a valuable paper on diabetic coma, and concludes as follows:

The rational treatment founded on the results obtained from the above-mentioned experiments is to administer alkalis. If the symptoms are urgent, and time is of moment, sodium carbonate might be administered subcutaneously or intravenously, as recommended by Stabelmann, the pulse being carefully watched in case of heart failure. At the same time, since the author's experiments have shown so great a diminution in the oxygen absorbed, it is advisable to encourage oxidation. The inhalation

of pure oxygen may help, as well as trying to improve oxidation by massage. Diuretics, together with large quantities of fluids, will be of value in increasing the rapidity of the elimination of the toxic products derived from the sugar. These are the means suggested to ward off attacks of diabetic coma, or even to diminish the severity of a coma already set in. —*Therapeutic Gazette.*

THE STRYCHNINE TREATMENT OF PULMONARY CONSUMPTION.

Next to rest and food, strychnine in large doses is the most important agent in the treatment of pulmonary consumption. Begin with $\frac{1}{32}$ of a grain, and gradually increase to $\frac{1}{16}$, $\frac{1}{10}$, or $\frac{1}{8}$ of a grain, or even larger doses, given four times a day. According to the author, it does not produce albuminuria or diabetes, as is generally supposed. It alleviates the loss of appetite, the vomiting, the constipation, the nervousness and sleeplessness, the pain in the chest, the cough and expectoration, the dyspnoea, the weakness of the heart, and acts as a blood-builder in an eminent degree. Its usefulness rests, of course, on its influence over the nervous system, and is another link in the chain of evidence which shows that in the great majority of cases pulmonary consumption is the direct result of primary disease of the pulmonary nerve supply.—Thomas J. Mays, in *College and Clinical Record.*

OBSTETRICS

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GLYCERINE INJECTIONS AS AN OXYTOCIC.

Pelzer (*Centralbl. f. Gynak.*, No. 26, 1894) read a communication on this subject at a recent meeting of the Cologne Obstetrical Society. He had collected twenty-eight cases, including nineteen in his own experience. Glycerine was used eighteen times for induction of premature labor ; in fifteen of these cases the pelvis was narrowed, in two there was Bright's disease, and in one placenta prævia. To stimulate uterine action at term glycerine was injected in seven cases of simple atony, in two of placenta prævia, and in one for some other complication. The pains came on after an average interval of two hours following the injection. Eight to ten hours elapsed before complete dilatation of the os, or a longer space of time in cases of contracted pelvis. Two of the mothers died, both from severe eclampsia ; the foetus was putrid in both cases. One child required craniotomy on account of its great size. Three children died from placenta prævia and strangulation by the funis. One, hardly thirty-two weeks old, died a quarter of an hour after birth. Only in one case could the violence of the pains be a possible cause of the death of the child. The glycerine had done its duty. Pelzer, however, deprecates injudicious zeal about this method ; thirty to fifty cubic centimetres, not one hundred cubic centimetres, are sufficient for injection. The method is not suitable for cases of eclampsia and placenta prævia, except the lateral variety, where the placenta can be avoided. Geuer (*ibid.*) read notes of three cases of induction of premature labor by injection of glycerine, in all of which both mother and child were saved. The first two mothers were over thirty-two, with contracted pelvis ; craniotomy had been performed in previous labors. The third case was an instance of bad eclampsia ; forty grammes of glycerine were injected, the os being at the time uncon-

tracted ; there was œdema, with much albuminuria. Forty hours later a healthy living child was born.

Oscar Embden (*N. Y. Medical Record*, July 28th, 1894) adds another case to those published by Pfannenstiel illustrating the dangers of glycerine injections into the uterus for the purpose of producing premature labor. His patient, in the ninth month of pregnancy, was noticed to have albumin in the urine, which was rapidly increasing in amount in spite of strict milk diet. The urinary sediments contained some white blood corpuscles, no red ones ; a few renal epithelial cells, and a few hyaline casts. Headache, nausea, œdema of feet and hands in this case were circumstances under which it seemed best to induce premature labor. 90 c.c. pure glycerine were injected between the uterus and foetal sac. She had a few slight pains at longer or shorter intervals for six hours, when a severe eclamptic seizure supervened. The os uteri barely admitted the finger, but rapid manual dilatation was performed by Dr. Jewett, and the child extracted by axis-traction forceps two hours later. The temperature was normal, but the pulse rate very slow, 50-55 per minute, whilst it had been 78 per minute before glycerine injection. Urine, which was drawn off by catheter after delivery, was of dark-red color. It contained no red blood corpuscles, but a large quantity of hæmoglobin. Twelve hours after delivery the water was only slightly colored, and twenty-four hours after the color was normal. The albumin gradually disappeared. The day following delivery a severe icterus set in, and the patient fell into a semi-comatose condition, which lasted for six days. The patient gradually recovered.

He concludes : (1) That glycerine does not act as quickly as we should expect.

(2) That Pelzer's method is liable to occasion indisputable symptoms of glycerine poisoning. (It is shown by Schwan, Luchsinger, and others, that glycerine is liable to cause a decomposition of the blood.)

(3) That concentrated glycerine may possibly produce thrombosis when brought into the circulatory system.

(4) That there is the danger of introducing air into the circulation with any kind of fluid injection between the uterus and foetal sac.

(5) That there is danger in glycerine injections in all cases, but particularly in cases where nephritis exists.

In the case reported, it seems indisputable that the icterus was caused by the decomposition of the blood poisoned by glycerine. That the coma, which did not look like an uræmic coma, was brought on by the same cause it was impossible to say, but it might possibly have been one of the indirect effects of the decomposition of the blood.

FATAL NAUSEA AND VOMITING OF PREGNANCY.

Dr. E. P. Davis, of Philadelphia, read a paper upon "Fatal Nausea and Vomiting of Pregnancy" before the American Gynæcological Society at its nineteenth annual meeting, held at Washington. He described in detail three fatal cases of nausea and vomiting of pregnancy. The first patient had been treated for chronic gastritis previous to coming under the author's notice. She had had continuous vomiting, and was very much emaciated. A tampon was put up to the cervix, and every effort made to nourish by the rectum, but the patient died from exhaustion. Before her death purpurial spots made their appearance. The size of the uterus compared with that of the second month of pregnancy.

In the second case there were prolapse and antelexion of the uterus at the end of two weeks of pregnancy. There was intense vomiting, with nausea, with considerable straining and retching. The diet was regulated, but the patient grew worse. At the end of the fourteenth week it was found that the body of the uterus was antelexed and the fundus impacted behind the pubes; this was corrected, but the condition did not improve. The os was then dilated, with slight improvement. It was decided to hasten delivery, and this was accomplished without much trouble and with very little hæmorrhage. Subsequently the patient attempted to rise, and died from syncope. The autopsy showed considerable fibrous tissue in the cervix posteriorly and anteriorly. The uterus, tubes, and ovaries were normal. The blood remained fluid and stained peculiarly. Two retention cysts were found. The points of interest in this case were the dense tissue found in the cervix, the retention cysts, the tenderness of the tissues, the hæmatin staining, and the signs of fatty degeneration.

In the third case the patient had suffered with severe substernal pain, nausea, and vomiting of coffee-ground-looking material. The uterus was not impacted, but sharply antelexed. Everything possible was done, but the patient died from exhaustion.

In a summary of the symptoms of this very fatal condition, Dr. Davis laid special stress upon that of the coffee-ground vomiting and the substernal pain. The nausea and vomiting of pregnancy were dangerous by reason of their being apt to cause pernicious anæmia. A case showing signs of obstinacy in yielding to treatment should be treated promptly by modern surgical methods.

POST-MORTEM CÆSAREAN SECTION: CHILD SAVED.

Backer (*Centralbl. f. Gynak.*, No. 24, 1894) states that last January a woman, aged 40, and in the last month of her eighth pregnancy, was admitted into hospital in a dying condition, with extreme dyspnoea owing to

oedema of the lungs. Delirium set in, and then eclampsia, immediately followed by death. The abdominal wall was at once opened, blood flowing freely, and then the uterus was incised. The presentation was pelvic; the foetus was seized by the foot and extracted. It was born in a state of algid asphyxia. After being swung fifty-six times, according to Schultze's method, it cried lustily. It was a female, seventeen inches long, and well developed. When the report was published, one hundred and eight days after birth, the child appeared to be doing well. From the moment when the operation was begun the mother showed no sign of life. The sphincter ani had yielded, and liquid motion escaped during the fit, which ended fatally. In 1891 a somewhat similar case occurred in the same hospital. The mother had just died of purulent meningitis. The foetus was asphyxiated; it was swung seven hundred and thirty-three times, but could not be saved.—*Epitome, British Medical Journal.*

SALICYLIC ACID IN PREGNANCY.

Salicylic acid and its compounds should not be administered to pregnant women who have a predisposition to abort. Their administration should be watched carefully in all cases of pregnancy, and, on the appearance of any "show," or anything resembling labor pains, they should be discontinued.—Vineberg, in *New York Medical Journal*, June 23rd, 1894.

A CASE OF MELENA NEONATORUM.

Shütze (*Centralblatt für Gynakologie*, 1894, No. 9) reports the case of a male child born of a healthy mother after a normal labor. The skull was found somewhat drawn after birth, and a tumor formed on the posterior part. During birth the cord was wrapped around the child's neck.

Three days after birth intestinal hæmorrhage appeared, accompanied by loss of weight and symptoms of anæmia. The autopsy showed the stomach distended with gas, and containing a teaspoonful of liquid blood. The gastric mucous membrane was intact. The duodenum, jejunum, and upper half of the ileum were free from blood, but in the lower small intestine and colon were found fluid and clotted blood, although there was no break in the mucous lining. Under the tentorium cerebelli on both sides small effusions of blood were found resting on the dura, and somewhat infiltrating the tissue.

SURGERY

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TUBERCULAR PERITONITIS—LAPAROTOMY—CURE.

Ruckis (*Pacific Medical Journal*, 1894) has added a case to those gathered by Hartman and Aldebert. It is that of a girl of eight years, operated on in 1892, in a severe attack of the disease. The drain was dispensed with on the second day. A small quantity of fluid reproduced itself in the abdomen soon afterwards; paracentesis was done, and since that time no signs of the disease have returned.—*Rev. Internat. de Bibliograph. Méd.*

CONTRIBUTION TO THE STUDY OF MOVABLE KIDNEY.

(MM. Verhoogen and Godard, *Gaz. de Gynécologie*, March 1st, 1894.) This is an abstract, by Dr. Philippeau, of a paper read before the Belgian Society of Surgery. Movable kidney is more common than is generally admitted. Out of 66 women in the department for digestive diseases, 28 had movable right kidney, and 4 of them had the left kidney movable as well. Of these 28, 14 had enteroptosis, 7 had the right kidney displaced, 4 had both kidneys floating, 3 had a movable kidney, but in its normal situation. This proportion the authors think too high. As regards causation, they mention repeated pregnancies leading to eventration, muscular atony, and laxity of the connective tissues, but movable kidney is also found in nulliparous women and in young girls, and hence it must be admitted that there is a complete independence between enteroptosis and movable kidney. Under these conditions the principal cause of displacement of the kidney ought to be attributed to abuse of corsets. From the point of view of symptoms, they divide the patients into three classes:

(1) *The neurotics*, very impressionable, with painful points in the back, the flanks, the sides, palpitations, etc. They are neurasthenics or hysterical. (2) *The dyspeptics*. This is the most numerous class; dyspeptic troubles are often added to those of movable kidney, and still further increase the difficulty of discovering which symptoms belong to each. (3) Patients troubled with uterine symptoms brought on by the floating kidney. In the symptomatology of movable kidney must be mentioned renal troubles, such as congestions, lithiasis, and alterations due to retention of urine in the pelvis of the kidney. As regards treatment, the authors consider that nephrorraphy is indicated in the dyspeptic troubled with obstinate vomiting with emaciation. M. Verhoogen considers that it is not necessary to attempt to fix the kidney in its normal position, for this would mean fixing it to the diaphragm, or the last ribs; if it is fixed in a convenient position in order to obtain the required results. He uses the L-shaped incision, and sews the kidney by four catgut sutures passing through its substance to the posterior lip of the wound. M. Verhoogen has done the operation in ten cases; eight healed by first intention, two suppurated, but finally healed.—*Quarterly Medical Journal*.

A NEW DRESSING FOR CIRCUMCISION.

Gundrum, in the *Therapeutic Gazette*, recommends that after suturing the skin and the mucous membrane together with fine catgut, the penis should be thoroughly cleansed with some aseptic solution and completely dried. Then, with the camel's hair brush, paint the penis from the meatus almost to the root with the following mixture:

R.—Resin.....	3ii.
Copal varnish.....	3ii.
Beeswax.....	3i.
Tallow.....	3ii.
Iodoform.....	3i.

M.

Apply coats enough to hermetically seal the penis, leaving the meatus free. The dressing is completed by wrapping one or two layers of aseptic gauze around the penis, and painting with the mixture.

When this dressing is used, there is no inflammation, no discharge, no swelling, no pain, and no crying and screaming. Before using this dressing the most troublesome feature of circumcision in children was the care of the patient after the operation. Now this is all changed, and after the first night the patient seldom loses sleep, and he eats well.

TREATMENT IN FOREIGN BODIES IN THE EAR.

M. Guillaume read before La Société Méd. de Reims a paper in which he lays particular stress on some important points. After having insisted on the necessity of always using warm water injections first, he cites a method to use when this has failed : instruments with agglutinous substances. Among these last he finds gutta-percha the most useful. He uses it as follows : It is melted in an iron spoon, and gathered in the end of a wire stilette provided with an eye at the end ; thus prepared, the stilette is applied to the foreign body and kept there for five minutes, to allow of the gutta-percha getting a good hold. The foreign body comes out. M. Guillaume terminates his paper by recommending that no foreign body be left in any ear ; when all other methods have failed, use the bistoury.—*Lyon Médical*.

TREATMENT OF PARAPLEGIA IN POTT'S DISEASE.

M. Ménard, of Brecksur-Mer, at the Medical Congress, observed the uselessness of laminectomy in two cases of paraplegia due to Pott's disease, and in practising the same operation in a third case incidentally opened a tubercular abscess of the vertebræ, the patient recovering rapidly. He now no longer opens the medulla in the spinal canal, but in two recent cases directly incised the tuberculous areas in the vertebræ. The patients were nine and ten years of age, respectively, and suffered from Pott's disease, with complete paraplegia and deformity, dating back some months. There were contractures and almost total anæsthesia, as well as complete loss of voluntary motion. The evening of the operation voluntary movements and sensibility had returned to a slight degree, and within four or five days sensibility as to touch, pricking, and heat was considerable. Three weeks later the patients could stand and had begun to walk, while at the time of report the cure of the paraplegia could be considered as definite.—*Universal Medical Journal*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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MASSAGE IN INFANTILE CONVULSIONS.

Schumann (*Therap. Monatsh.*, March, 1894), after discussing the intestinal causes leading to eclampsia and convulsions in children, dwells on our inability to render much active and immediate assistance. Anæsthetics, purgatives, etc., are dealt with, and the author then describes how he has lately, in the case of several children, resorted to abdominal massage, which led to instantaneous relief. With or without an anæsthetic, according to the nature of the case, the child's abdomen should be rubbed for several minutes, when the passage of flatus and a thin stool will show the success of the treatment. The history should be inquired into first, and, when there is a probability of the presence of peritoneal irritation, the massage may be contraindicated.

THE ALIMENTATION OF YOUNG CHILDREN.

In a valuable paper on this subject (*Archives of Pediatrics*, June, 1894) by Dr. Lewis Smith, the part played by milk in the dissemination of disease is well shown. Illustrations are given of conveyance of tuberculosis, scarlet fever, diphtheria, and typhoid fever by the milk supply. He quotes Klein and Prudden as being of the opinion that the milk of a tuberculous cow may contain tubercular bacilli, in whatever part of the animal the tubercles are situated.

The following brief résumé of cases reported by well-known clinical teachers show the need of frequent and careful inspection as regards the presence of tuberculosis in the dairy which furnishes milk for the nursery. Ollivier (*La Semaine Medicale* Feb. 25th, 1891) states that within three

months, in a school for girls there occurred eleven cases of tuberculosis, of which five were fatal, and with several of these patients the disease seemed to originate along the gastro-intestinal tract. Two other pupils of this school died of tuberculosis. Their previous excellent health and that of their parents justified the belief that they also contracted tuberculosis from the milk. On searching for the cause of this disease, it was believed to be the milk supply, and on killing the cow that furnished the milk its lungs were found to be in an advanced state of tuberculosis.

DIPHTHERIA TREATED BY ANTITOXIN.

In *The British Medical Journal*, July 28th, 1894, Dr. George F. Still gives the following report of a case of diphtheria under the care of Dr. Goodhart in Guy's Hospital, in which treatment by injections of antitoxin was adopted :

J.C., aged 3 years, was admitted at 2 p.m. on June 23rd. It was said that he had been at play, and apparently quite well that morning. At midday he complained of his throat, and had croupy cough, and respiration soon became difficult. On admission there was considerable inspiratory stridor, and some "sucking in" above and below the clavicles, and also in the lower intercostal spaces. On the right tonsil was a patch of membrane. The tonsils and fauces were very slightly injected and swollen. The temperature was 102.4° , the pulse 140, and the respiration 34. The color was good, but the child was distressed and restless. Tracheotomy seemed imminent, but the operation was deferred till bed and steam kettle had been tried. At 4.30 p.m. antitoxin *mxj.* was injected hypodermically in the forearm, with strict antiseptic precautions. At 6 p.m. the patient seemed more comfortable. The temperature was 99.2° ; respiration continued difficult, but the patient was less restless, and slept fairly well during the night.

June 24th. The temperature was about 99° all day, the pulse 128, and the respiration 32. The child was again becoming restless, and the stridor was increasing. Antitoxin *mvij.* was injected at 4.30 p.m.

June 25th. The stridor was much less. The child was playing and talking, and took solid food. The temperature was normal.

From this time the stridor decreased. The child seemed perfectly well, playing and laughing merrily, although the cough remained croupy until June 27th, and membrane persisted on the tonsil until June 30th, that is, seven days.

The diagnosis was made certain by cultivation from the membrane.

The only additional treatment adopted was a steam kettle and tent bed, and brandy *mxix.* every four hours. A spray of iodine and carbolic

acid was tried twice on June 23rd, but as the child objected it was not used again. The antitoxin used (kindly given by Messrs. Zimmermann & Co.) was Schering's. Whether the favorable result was *post hoc* or *propter hoc*, it is noteworthy that the subsidence of constitutional disturbance was extremely rapid, occurring within a few hours after the injections; that the constitutional improvement occurred while the visible membrane persisted, apparently without corresponding improvement; and last, but not least, that the injection would seem to be entirely innocuous, being followed by neither local nor general disturbance.

A REMARKABLE CASE OF INTUSSUSCEPTION.

A remarkable case of intussusception, which terminated in recovery, is reported by E. M. O'Connor (*British Medical Journal*, July 21st, 1894).

A lad, aged 13, after a severe wetting, suffered from obstinate constipation. He was given purgatives at intervals, but without effect, except to cause extreme pain. This continued for six days, when medical advice was sought. An opiate was given to allay pain, and a second visit paid in the evening. In the interval there had been a very copious passage from the bowels. On examination, the greater part of the matter consisted of intestine. The pain now became less, and the patient's condition improved daily until in two weeks' time he was able to sit up, and was quite free from pain. Diarrhoea still continued, the bowels being moved sometimes six times a day. It is now twelve months since the attack. The boy looks strong and healthy. Has had no pains in abdomen. Bowels continue slightly relaxed ever since the attack.

The evacuated bowel, as shown by the photograph, consists of ilium, with Meckel's diverticulum. The total length was eleven and one-quarter inches. The upper portion was invaginated into the lower, the entire length of the diverticulum appearing through the lower opening.

SURGICAL TREATMENT OF IDIOCY AND MICROCEPHALUS.

In an address delivered before the International Congress at Rome, 1894, Dr. Jacobi discusses at length the operation of linear craniotomy for the relief of idiocy presumably due to microcephalus. The speaker points out that while the operation is made for microcephalus, yet, from the measurements given and histories obtained, many of the cures do not belong to that class. Moreover, in cases undoubtedly microcephalic the cause is not always due to premature ossification. In his own experience it is the rule to see microcephalus with open sutures. A strong point against the operation is the fact that there is no evidence to show that enlargement of the cranium follows removal of the strip of bone. In

one reported case, instead of enlargement, there was positive diminution of the cranial cavity. After discussing the operation at length, the experience of several American surgeons is given in the following :

"I hold in my hand, Mr. President, the reports of cases operated upon for so-called idiocy, or for so-called microcephalus, by such American surgeons only as I could reach personally, so as to have their tales verified from their own lips. The cases I command are 3 of Dr. Charles McBurney, of New York ; 2 of Dr. Willy Meyer, of New York ; 8 of Dr. John A. Wyeth, of New York ; 14 of Dr. W. W. Keen, of Philadelphia ; 3 of Dr. Bernard Sachs, operated upon by Dr. Arpad Gerster, of New York ; and 2 of Dr. A. Vanderveer, of Albany, N.Y. On these 33 cases 41 operations were performed. Of 33 there were 14 deaths and 19 recoveries. The deaths did not occur in the very young ones alone, but also in those four, five, and six years of age. Most of them occurred soon after the operation, six within a day. Cause of death is not always given or known ; in one it was attributed to the anæsthetic ; a number of them developed a very high temperature which was not explained, inasmuch as not even the dura was injured. Many died of shock a few hours after the operation. The final report as to their mental and general condition was as follows : No history obtained, 1 ; uncertain, 1 ; no improvement, 7 ; slight improvement, 7 ; "some," 1 ; much improvement, 2."

INHALATION FOR NASAL, PHARYNGEAL, AND BRONCHIAL CATARRH.

In considering the treatment of this condition, Dr. Clarence Rice (*Archives of Pediatrics*, April, 1894) recommends the following formula :

Menthol.....	.grs. v.
Thymol.....	.grs. v.
Carbolic acid.....	.grs. v.
Oil of eucalyptus.....	℥ii.
Oil of pinus sylvestris.....	℥iii.

Directions : A teaspoonful on the boiling water, or twenty or thirty drops on the sponge or absorbent cotton. Inhale for ten or fifteen minutes.

The spout of the croup kettle can be placed near the head of the patient while she is asleep, and both the child and kettle enclosed under a sheet. This warm medicated steam will liquefy the secretions, diminish congestion, relieve the dyspnoea, and stop the cough. Nicely finished apparatus for giving these inhalations may be found in the market, though they are on the principle of the croup kettle, which can be manufactured cheaply in any tin shop.

EPIDEMIC JAUNDICE

Dr. Wm. Rankin, in the *British Medical Journal*, May 26, reports a number of cases of acute jaundice occurring at the same time or with slight intervals. During the months of July and August he saw eleven cases of this kind, and all within a limited area—not more than a mile long and half a mile wide. When one case occurred in a family, as a rule other members were affected. In one instance three children in one family had the disease. All recovered quickly. The district where these cases occurred was low-lying. In March and April of 1894 a similar epidemic was encountered in this series; six children of one family had the jaundice.

Treatment consisted of a calomel purge, repeated after an interval of three days, and a mixture of acid nitro.-mur. dil. and nux vomica.

The cases were invariably in children, the eldest being 13.

INFANT FEEDING.

Percy Boulton, in the *British Medical Journal*, publishes a useful table showing the normal weight for height of children born at full term. The height and weight is given at six-month periods, from birth up to the fifth year.

The table shows that an infant should double its weight in six months and treble it in a year if its nutrition is in every way satisfactory. The practical point is this: If a child does not increase at the rate of 1 lb. a month during the first year of life, and 12 ozs. a month during the second year, its nutrition is not satisfactory. If a child does not grow nearly three-quarters of an inch every month during the first year of life, and one-half inch a month during the second year of life, it is not satisfactory. The latter is, of course, not of the same importance as the former. Clearly premature children would not be so large, though they should increase at the same ratio.

PATHOLOGY

IN CHARGE OF

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ASSISTED BY

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THE ROLE OF NERVOUS DEBILITY IN THE PRODUCTION OF FEVER.

Professor Bouchard, of Paris, presented a paper on this subject at the Medical Congress in Rome. Fever patients brought into hospital nearly always show an elevation of temperature on the day of the entrance or the following day, this elevation—sometimes as much as one degree—being due entirely to the influence of the nervous system. The visits of friends, as is well known, cause a return of the fever; muscular fatigue increases it, or causes its return in a convalescent who gets up for the first time; and, in a tuberculous patient, even a very short walk will cause an increase of two degrees in temperature. These factors do not produce fever in a healthy man, and fever in disease is not generally attributed to them. Daily observation, however, warrants the author in asserting that indigestion, bodily or intellectual fatigue, or moral perturbation, which plays an established empirical rôle in the development of diseases, may also aggravate such diseases or compromise recovery. Fever would here be produced by the aggravated disease, and not by the perturbing influence, which would thus act but as the indirect cause.—*Universal Medical Journal*.

RENAL SARCOMA.

Brandt reports a case of a male infant, aged fifteen months, in whom a sarcoma of the right kidney filled two-thirds of the abdominal cavity, extending to the right lumbar region as far as the left mammary line. The tumor was removed without difficulty, and without opening the peritoneal cavity, and the recovery of the little patient took place in a very short time.—*Norsk Magazin for Lægevidenskaben*.

THE BRAIN IN EPILEPSY.

Harold Holm (*Nordiskt Medicinisk Arkiv*) has found, in microscopical examination of the brains of three epileptic patients, degenerative processes in the cortical substance, extending to the psychomotor centres, and even to the medulla oblongata and the spinal cord. He endeavored to produce similar changes in the brains of young rabbits by percussion with an ordinary percussion hammer on the skull, somewhat in front of the ears. After each percussion, as is known, epileptic fits occur, continuing for some time, and if daily treated in this way the animal dies in about ten days. A microscopical examination of the brain shows less visible degeneration in the cortical substance than in the portio medullaris, the whole brain, with the exception of the occipital and temporal lobes, being involved. The connecting fibres from the brain to the medulla oblongata and the corpora rectiforma are also attacked by the degeneration.—*Universal Medical Journal*.

RESEARCHES ON TINEA CAPITIS.

Biro (*Gazeta lekarska*), after numerous and very careful investigations and experiments (as, for instance, the cultivation of bacteria on various soils, the investigation of the development of the bacteria of favus and its inoculations in men), arrives at the following conclusions: (1) That the parasite of favus, cultivated on various artificial media, manifests itself differently. (2) That cultures, apparently differing at first, after a certain series of cultures on the same soil, begin to resemble each other in appearance. (3) That there is a certain dependence between the appearance of the bacterium of favus and the soil on which it is cultivated, and that the bacterium accommodates itself to the soil. (4) In view of these facts there is no certainty that former writers had not met with one and the same bacterium, and that no proofs exist that there is more than one variety of bacteria in favus.—*Universal Medical Journal*.

BILIARY CALCULI.

Halk (*Bibliothek for Lager*), in a series of 414 autopsies upon patients between 50 and 90 years of age, found biliary concretions in 29 per cent., the percentage in the female being 40 and in the male 19. In 112 cases the stones were lodged in the gall bladder alone, in 3 cases in the bile ducts or intestines as well, and in 4 cases in the ductus choledochus only.—*Universal Medical Journal*.

Editorials.

THE INSIDIOUS READING NOTICE.

UNDER the above heading, the following appeared in *The Medical News*, September 1st, 1894 :

"We regret to see the reading notice (and of nostrums at that) creeping into the otherwise clean and interesting columns of our respected cotemporary, THE CANADIAN PRACTITIONER. It is but recently that we had occasion to congratulate THE PRACTITIONER on the elimination of interleaved advertisements from among the pages of its text. We were encouraged to hope that its example would not be without influence upon other journals, and that its action might be viewed as a promise of a finer discrimination in general in the acceptance of advertisements by medical journals."

The editor of THE CANADIAN PRACTITIONER desires to give this editorial notice the greatest possible prominence, and to tell our readers, our contemporaries, our advertisers, and our printers that he cordially endorses the sentiments expressed by *The News*. He had hoped that the intermingling of advertising notices with ordinary reading matter in this journal was some time ago a thing of the past. He wants no more of it ; and in saying this he is speaking for the whole editorial staff, and also, he is happy to add, for the publishers. He offers no explanation, because he doesn't happen to have any material available for anything satisfactory in that direction. Carelessness is no excuse for a gross violation of legitimate and respectable methods in medical journalism.

THE BRITISH MEDICAL ASSOCIATION.

THE recent meeting of this wonderful association was quite as successful as those of previous years. We can scarcely say anything more complimentary, considering the marvellous success which has attended all the meetings for a long time. We learn from the *British Medical Journal*

that this is the third time the meeting has been held in the "capital of the west." The first meeting was held sixty-one years ago, shortly after the formation of the association. There were present 200 out of a total membership of 400; *i.e.*, 50 per cent. According to the *Journal's* estimate, there were present at the Bristol meeting this year only about 5 per cent. of the present membership of 15,000. The next meeting will be held in London, and it is expected that the attendance will be very large. The president-elect is Dr. Russell Reynolds, president of the Royal College of Physicians. The last meeting in London was held in 1873, under the presidency of Sir William Ferguson. At that time the number of members present was 3,000, and it is supposed that the meeting of 1895 will include not less than 6,000.

TORONTO AND THE ONTARIO MEDICAL COUNCIL ELECTIONS.

IT will be noticed in the report of the proceedings of the West Toronto Territorial Association that Dr. Arthur Jukes Johnson, who has represented Toronto and some outlying districts during the last five years, has decided not to be a candidate at the coming election for the Ontario Medical Council. After passing a unanimous vote of thanks to Dr. Johnson for his work in the interests of the profession while a member of the council, the members decided, without any dissenting voice, to support Dr. H. T. Machell in his candidature for the position. We think it fair to state that Dr. Johnson's course in the council during the last five years has been, in a general way, very satisfactory to the great majority of his constituents. Dr. Machell, who will probably be elected without opposition, will, we believe, make an excellent representative. We do not happen to know his views on all the *burning* questions at issue between the outgoing council and the Defence Association; but we think his level-headedness, common sense, ability, and honesty of purpose will always keep him on the right track.

Toronto was formerly a portion of the Midland and York Territorial Division, which comprised the North Riding of the County of York, South Riding of the County of Simcoe, the township of York, and the city of Toronto. According to the redistribution (the so-called gerrymander), which provides for five new territorial representatives, the city of Toronto is divided into two electoral districts, *viz.*, No. 10, or East Toronto, and No. 11, or West Toronto. As we informed our readers some months ago, Dr. Barrick received a requisition signed by a large

majority of the physicians of East Toronto, and has consented to be a candidate. We are unlikely to have any election in either division of Toronto. Drs. Barrick and Machell are practically certain to be elected; and probably the great majority of the electors will agree with us when we say that no better men could be selected for the offices.

THE MEETING OF THE CANADIAN MEDICAL ASSOCIATION.

THE St. John meeting was a success. So say all (not many) from the west who were in attendance. The last meeting in the far east was held in Halifax, August 3rd and 4th, 1881, under the presidency of Dr. W. Canniff, of Toronto. The attendance at that meeting was not large, but those present were highly satisfied with its success. The special feature, however, which has never been forgotten by the visiting members, was the wondrous hospitality exhibited by the Haligonian doctors.

The attendance at the recent meeting in St. John was much larger than at Halifax. The papers were not many, but good, and some of the discussions are said to have been very interesting and instructive. The visitors received right royal treatment from the local physicians. A ball given in their honor was a brilliant affair, and highly appreciated. In a private way the doctors of St. John and vicinity were exceedingly kind, as the visitors one and all testify.

The meeting of next year will be held in Kingston, under the presidency of the able and genial veteran, Dr. Bayard, of St. John. The members of the west were delighted in joining hands with their friends in the east, and electing to the post of honor this distinguished and charming man. We hope a large number from the maritime provinces will put in an appearance at the next meeting.

Kingston has had one meeting, held in September, 1883, under the presidency of Dr. Mullin, of Hamilton. The number in attendance was exceedingly small, about eighty; but the meeting was a fairly good one. Kingston is an interesting and beautiful old city, conveniently situated for both eastern and western sections. Its physicians are able and generous as shown by their very kind and cordial reception of the visiting members in 1883. The Dominion Association should receive a hearty support from all sections. There was an unusual amount of enthusiasm shown at St. John, and we hope it will not die out before next year. There should be an attendance of at least one hundred and fifty; and if there be present even a small number from each of the other provinces, Ontario surely ought to see to it that the attendance be not less than the number named.

QUACKERY AND THE COUNCIL.

ONE of the charges which has been brought against the Ontario Medical Council is that of negligence in the matter of suppressing quackery. We have watched the course of the council in its treatment of medical quacks and humbugs for some time, and we have no hesitation in saying that it has shown a very commendable zeal during recent years in its persistent efforts to repress various forms of charlatanism. We know that its efforts have not been altogether satisfactory; but, when we consider the difficulties which have to be overcome, we can scarcely wonder at it.

The "Committee on Discipline," as we have before pointed out, has done much more work during the last two or three years than most of our profession have any knowledge of. When offenders have been brought to trial they have frequently fought very vigorously—to such an extent that a verdict against them has been difficult to secure, and to enforce. The members of that committee are Drs. Day, Bray, and Logan. We believe that all have worked very faithfully in their battles against quackery, but we desire to refer especially to Drs. Day and Bray, who are the only territorial representatives on it. We believe the experience they have acquired ought to be very valuable, and regret exceedingly that both of these men will not be in the new council.

Dr. Day has declined to be a candidate for reasons which we will not discuss. We believe his decision has been a most unfortunate one, in the interests of the profession, in many ways. His retirement makes the election of Dr. Bray all the more desirable, partly on account of the experience derived from his work on this committee, but also for many other reasons, which we will not attempt to give now. We had hoped and expected that he would be elected without opposition. We think it desirable that any of the best available men in the present council be re-elected. Under present circumstances, it will not be possible to have more than six of the old members out of seventeen territorial representatives in the next council. Such being the case, it would hardly seem wise to defeat a man of Dr. Bray's ability and experience.

We have recently learned that Dr. James Samson, of Windsor, has decided to oppose him, and has issued an address to the electors announcing his candidature. We regret this, not on account of any objections to Dr. Samson, who is an able and conscientious physician, well known and highly respected in Western Ontario, but because we think, for reasons to which we have very briefly referred, that Dr. Bray ought to be a member of the council for at least one more term. Many of the mutual friends of the two candidates agree with our views, and think it would be a graceful act if Dr. Samson at once retired from the contest.

Meetings of Medical Societies.

REPORT OF THE CANADIAN MEDICAL ASSOCIATION.

The annual meeting of the Dominion Medical Association was convened in St. John, N.B., August 22 and 23, 1894. The meeting was well attended by medical men from nearly every province, the larger number coming from the maritime provinces. The association had not met in St. John before for twenty years. Fraternal delegates were introduced : Dr. J. M. Jonah, of the Maine Medical Association ; Dr. Bulkley, of the American Medical Association ; Drs. J. E. Graham, I. H. Cameron, and Chas. O'Reilly, of Toronto, delegates of the Ontario Medical Association. The chair was occupied in an able manner by Dr. T. S. Harrison, of Selkirk, Ont. Dr. F. N. G. Starr, of Toronto, acted as secretary. Sir Chas. Tupper, of London ; Drs. Osler, of Baltimore ; Marcy, of Boston ; Bray, of Chatham ; Mullin, of Hamilton ; and Maclean, of Detroit, sent letters of regret at not being present.

The subject of the treatment of epilepsy was first taken up, the paper being presented by Dr. Hatie, of Halifax. He gave a description of the various changes that have been said to take place in the cerebral cells during fits of different kinds, and pointed out that the causation might be due to the influence of some irritant acting upon the cerebral cells which put them in a state of excitability, or which by being produced in the encephalon, and not eliminated quickly enough, the nerve explosion was nature's method of getting rid of it ; that the convulsions were due to an abnormal functioning of the cells in some part of the nerve centres, the location determining the character of the seizure. This poison might be generated in the system. If this were the case, the rational treatment would be the eliminative and antiseptic one. This he had tried, by giving, in addition to the bromide of potassium, beta naphthol. The results were very gratifying, the number of fits per patient having been materially reduced.

After discussion of this paper by Drs. Cameron, of Toronto, and Wright, of Ottawa, Dr. Muir, of Truro, gave the history of a case of tuberculosis of

the arm which had been cured by erysipelas. The patient was a woman, aged 39, who had had the disease for fourteen years well marked and typical, showing the presence of the bacillus of tuberculosis when its discharges were examined microscopically. The patient had been chloroformed, and the sinuses were scraped and iodoform dressing applied, but little or no recovery took place till the end of five weeks, when quite accidentally the wound became infected with erysipelas. She became very ill, but finally recovered from the erysipelatous attack, and shortly after the tuberculous trouble disappeared entirely. Photographs were shown of the arm after the healing had taken place.

The following gentlemen were appointed as members of the Nominating Committee: Drs. Hingston, Shepherd, I. H. Cameron, O'Reilly, Christie, McLaren, Tobin, Dienstadt, Macleod, and Johnson.

Dr. Harrison delivered his presidential address, taking as his subject his observations and experience in medicine during the past fifty years. He compared the diseases in existence then with those we have now. Since the clearing up of the country in his Province of Ontario, the miasmatic diseases had become things of the past. He referred to the horrible concoctions of domestic medicine, such as an infusion of sheep excrement for measles, and that of cats, which, he said, might not be considered a bad substitute for asafœtida, was the "sovereignest" thing in fits. The old veteran referred to many practical points in his practice. He pointed out the danger man was in of becoming egotistical or of getting into a rut when he was so far removed from other medical men. The corrective of this he considered to be the attendance of medical associations. A considerable portion of the address was taken up in discussion of the question of inter-provincial registration. Every practitioner in Canada, he considered, should have the right of practising in any part of the Dominion, without having to submit to an examination. He believed in a high standard both as to matriculation and graduation.

The president was accorded a hearty vote of thanks for his address and a committee was appointed to consider the matter of reciprocity discussed in his address.

The subject of appendicitis was discussed by Dr. Bell, of Montreal. He reported forty-eight cases; forty of them operated on with recovery, five not operated on, and only three deaths altogether. He classified his cases into the gangrenous, the perforative, the non-perforative, and those bound in with adhesions. These cases should be watched, he maintained, by a surgeon from the first, as little could be done for its relief medically. He advocated surgical interference in nearly all cases.

Dr. Hingston thought the operation was performed unnecessarily. No young man should attempt to enter the abdominal cavity without first

consulting one or two others. He had prevented the operation twenty-five or thirty times, and only regretted this step in one case. He was strongly in favor of conservatism.

Dr. Grant, of Ottawa, spoke of two cases he had had which appeared to be fit ones for operation, but one was in a gouty subject, the other in a rheumatic. He did not operate, and they recovered. It was very difficult to know what to do in these cases. He did not believe it was due to the presence of foreign bodies in the organ.

Dr. Shepherd pointed out that the surgeons got the worst cases, so it was difficult to say just what the number of cases was which were operated upon as compared with those that were wholly treated medically. His idea was to operate after the acute attack had subsided, in the interval. He attributed the tender point of McBurney, not to the appendix, but to the inflamed condition of the mesenteric glands; for the appendix might be found on the right side, in the pelvis, or up under the liver.

Dr. Strange was in favor of non-interference until there was the presence of a tumor and pus. He had refrained from operating during the acute stage, and had not regretted it.

Dr. Cameron, of Toronto, said he followed Mr. Treves in this matter; to wait until the pus formed, open and drain. He considered it unfortunate that the experience of a hospital surgeon of skill should determine the matter one way or the other. In a possible forty-eight cases he had had in which he had followed out the above treatment, he had had, probably, Dr. Bell's figures reversed. The interval he believed to be the time to operate.

In replying to discussion on his paper, Dr. Bell said that it was conceded by all the speakers that no man knew when to operate. Out of the forty cases he had operated on thirty were perforated, and there was abscess at the time of operation. In three the appendix was wholly gangrenous; in two the appendix was bound down by inflammatory adhesions; in other three the appendix was not perforated, but gave rise to symptoms indicating very severe appendicitis, yet there was no abscess found. He used to follow the waiting treatment, and his losses were far greater than now. The greatest mortality statistics for these operations amounted to from two to three per cent. If the patients were left, perforation and collapse might follow at any moment. The very mild, or, rather, short cases, where all the typical symptoms were present and passed away in twelve hours, need not be interfered with; they were probably cases of cæcitis. He thought the method followed by Treves not according to the true principles of surgery.

"Eye-strain Headaches" was the subject of a paper read by Dr. Morrison, of St. John, N.B. He gave an extensive list of cases where

the true cause had not been found; as a result the varied forms of treatment gave unsatisfactory results, only in so far as they gave rest, unconsciously, to the eyes, and supported the general bodily health. A schoolboy had Wednesday headaches. Resting Saturday and Sunday from study, the eyes stood the strain till Wednesday, when he was obliged to lie off. Suitable glasses, directed to the correction of the astigmatism and hypermetropia, effected a cure. Often the patient was treated for a long time for some other disorder altogether. The eye should, in the headache cases, be taken into consideration; for he affirmed that ninety per cent. of all cases were due to eye-strain. Treatment must be directed to a correction of the mechanical defects in the cornea; to strengthen the delicate muscle of accommodation by tonics and massage; and, for young ladies, he recommended gymnastic exercises.

The subject of diseases of the ovaries and tubes was gone into by Dr. Smith, of Montreal. In gonorrhœal salpingitis, the clinical history of which he went into, the only safe treatment was extirpation; this was also the course to pursue in the tubercular form if the general constitution were not too much infected with the poison. He advised medicinal treatment for the functional disorders of the appendages. The paper was illustrated by a number of interesting cases, and the presentation of tubes and ovaries that he had removed.

THURSDAY MORNING.

The Nominating Committee brought in the following report: President, Dr. Bayard; General Secretary, F. N. G. Starr, M.B., Toronto; Treasurer, Dr. Small, Ottawa; Vice-Presidents: Drs. Shaw, of Hamilton, Ont.; Armstrong, Montreal, Que.; McLaren, New Brunswick; McKean, Nova Scotia; Blanchard, Manitoba; Haultain, Northwest Territories; McLaren, Prince Edward Island; Edwards, British Columbia; Provincial Secretaries for the above provinces, named in order: Drs. Fenwick, of Kingston; Campbell, of Montreal; McNally, Hattie, N.S.; Nelson, Manitoba; Macdonald, Northwest Territories; McNeil, Prince Edward Island; Richardson, British Columbia.

Dr. Kirkpatrick, of Halifax, took up the subject of nasal cauterization, in which he uttered a warning note against entering the nasal cavity with strong caustic without discrimination and care. He had seen entire destruction of the membrane and other serious consequences follow the abuse of these remedies, which were of so much value if properly used.

Dr. Bayard delivered the address in medicine, taking for his subject the influence of the mind on the body. The paper outlined the anatomy and physiology of the nervous system, specially referring to the nerve route of pain. Instances were given where emotions of various sorts caused contraction or dilatation of the terminal arteries, with hyperæmia

and secretion in glands, or anæmia and checked secretion. The various nervous diseases were referred to, their causation discussed, and their prevention recommended through a reformation in our educational and social systems.

As an outcome of one of the points referred to in the address, at the suggestion of Dr. Hingston, Dr. Bayard moved, seconded by Dr. Hingston, that the system of education generally pursued in the Dominion of Canada draws too largely upon the brain tissue of children, and materially injures the mental and bodily health. Drs. Cameron, of Toronto, and Powell, of Ottawa, thought the terms of the resolution were too sweeping ; that there was no specific statement as to what department of the school system was at fault, nor to what portion of the Dominion it more especially applied. Our young people, Dr. Cameron thought, were not suffering, nor the older people either, from too much education. The educational system had been the subject of the best thought of our best men, and he considered the motion too condemnatory. A resolution was then passed that the matter be referred to a committee consisting of Drs. Powell, Hingston, Graham, and Bayard.

The committee appointed to report on the president's address reported on the matter of inter-provincial registration. It was adopted. Dr. Daniel moved, seconded by Dr. Powell, that a committee be appointed in which each of the provinces shall be represented to draw up a form of medical act, which, after being adopted by this association, shall be presented to each provincial legislature, to be by them passed into law ; and that the committee that brought in the report be asked to name such committee.

Dr. Buller moved, seconded by Dr. Laphthorn Smith, that a committee be appointed, with power to add to their number, to consider the best means of obtaining a uniform standard of medical education for the Dominion of Canada, and that said committee report at the next meeting of the association. This carried.

The discussion over the above question was long and animated, and taken part in by several of the men from the different provinces represented at the association.

"Some Functional Derangements of the Liver" was the subject of a paper by Dr. J. E. Graham, of Toronto. He reviewed the history of the physiology and pathology of the liver, and showed there were other and no less important functions of the organ beside its biliary function. He then outlined the complete work that the liver performs in the human economy. Its importance as a blood-elaborating and fat-forming organ in the foetus must be great when it was equal in weight to all the rest of the body at the end of the first month, in the proportion of one-third at the end of the third, and one-sixteenth at the end of the fifth. The doctor then dis-

cussed the question of "hepatic inadequacy," a condition induced by the action of certain poisons upon the hepatic cells. The hepatic cells stored up the glycogen till needed by the economy, and when this function was impaired various clinical phenomena were observable. Their work as manufacturers of urea was also disturbed. As to treatment, the exact cause of the "biliousness" or kindred trouble should be found out in order to treat successfully. The diet should be most carefully attended to; starchy foods should be interdicted. Milk, on account of its easy assimilation and diuretic action, was valuable. To assist the circulation certain forms of exercise were recommended. Massage over the region of the gall bladder was helpful, promoting the egress of bile from it, and free purgation was very essential. The drugs, calomel, euonymus, podophyllum, and others, were then discussed. Where the manufacture of urea was incomplete, treatment directed to increase of metabolism was recommended, massage, bathing, drinking of mineral waters. The great point to aim at was to secure the integrity of the hepatic cells.

Dr. Graham discussed the question of treatment in a full and scientific manner.

Dr. Hingston, of Montreal, reported four cases of brain operation, two of which were for epilepsy. A third was for the relief of a young man who had received a skull injury some twenty years before, which had resulted in paralysis of certain muscles of the arm, and spasm of certain of the muscles of the face. Operation afforded almost complete relief. The doctor showed the kind of trephine he used, being one of two inches in diameter. He pointed out its advantages over the smaller ones.

Dr. F. J. Shepherd, of Montreal, reported a case of "Interscapular Thoracic Amputation," the first, he believed, that had been performed in Canada. It was in a stout woman for a chondro-sarcoma surrounding the shoulder joint, which was causing serious pressure symptoms and inability to use the arm. The doctor described the technique of the operation. The principal point of difficulty was in reaching the subclavian. He left the scapula intact. He also reported the removal of a large enchondroma of the pelvis, which appeared as a continuous growth with the ilium. He (the patient) had been refused operation in New York and Philadelphia. Upon dissection it was found to be subgluteal, and only having two attachments. Its removal was comparatively easy. The reader of the paper presented photographs of the cases. He also reported the removal of a cirrroid aneurism which gave him a great deal of trouble in trying to check the bleeding.

Dr. Buller read a paper on "The Present Status of Asthenopia."

"The Prevention of Tuberculosis" was the subject of a practical

paper by Dr. Inches, of St. John, N.B.. He cited numerous cases to go to prove the infectiousness of tuberculosis, and said that, while it was not infectious just in the same way that smallpox and typhoid fever are, yet he believed it was time that steps were taken towards preventing its further alarming spread. This reformation could not be effected in a day, but the matter could be agitated, and it was the duty of the medical man not only to keep himself posted on the subject, but to be prepared to advise his patients of this class, and their friends as to the best plan of looking after the trouble. Some thought that notification, registration, and isolation should be taken in all cases. This was, perhaps, at present impracticable; but there might be a rule made that all cases should be reported in which preventive measures were not carried out when advised and instructed by the physician.

"Some Practical Points in Treatment of Diseases of the Skin" was the subject of a paper by Dr. Bulkley, of New York. He emphasized the necessity of the most careful examination and note-taking in these cases at every visit of the patient, and the necessity also of continued patient treatment. In eczema, he said to be careful about the use of new remedies. He was much amused at the indiscriminate use of arsenic. He recommended the use of alkalies to combat the acid state of the blood found in eczema. Acetate of potash was what he used. Externally, the custom was to use the irritating ointments. One of his favorite prescriptions was :

Ac. carbol.....	ʒss.
Calamine preparata.....	ʒi.
Zinci ox.....	ʒii.
Glycerine	ʒiii.
Aq. calcis.....	ʒiv.
Aq. rosæ.....	ʒiii.

But he had found that the correction of some fault in diet or habit of the patient, and the administration of hygienic and tonic treatment, of the greater importance. The doctor also went into the subject of acne and other common trouble, and gave the members present some very valuable points.

Dr. Laphthorn Smith gave a very interesting exhibition of the use of the galvano-cautery, in which the street lighting current is used. He showed how simple it was, and how far superior it was to the old battery arrangement. The cost was trifling.

THURSDAY EVENING.

The report of the committee appointed at the last association to consider the matter of the establishment of a pharmacopœia was received and

adopted. On motion of Dr. Starr, seconded by Dr. Macdonald, it was moved that the same committee be requested to correspond with the different medical and pharmaceutical associations with regard to the advisability of publishing a pharmacopœia, taking the British Pharmacopœia as a standard. Carried.

"The Prevention of Consumption" was the subject of a paper by J. F. Macdonald, Nova Scotia. He advocated the bringing the matter of the contagiousness of this disease before the people by means of the secular press, by the establishment of philanthropic societies for the discussion of the matter, and the adoption of practical measures for the treatment of the cases. He advised the system of registration, a careful system of disinfection, government inspection of infected places, the establishment of sanitarium, and the enactment of laws to prevent the infected from spreading the infection.

Dr. H. D. Hamilton read a paper on "The Adhesions of the Soft Palate and Their Treatment."

Dr. K. N. Fenwick then read a paper on "Hysteropexy." It was discussed by Dr. Cameron, of Toronto, and Dr. L. Smith, of Montreal.

Dr. J. T. Steeves, of St. John Lunatic Hospital, read a paper entitled "A Medico-Legal Romance." It was discussed by Drs. Muir, Macdonald, Morrison, Christie, Hattie, and Travers.

The association then adjourned to meet next year at Kingston, Ontario.

WEST TORONTO TERRITORIAL DIVISION MEDICAL ASSOCIATION.

A largely attended meeting of the above association was held in Broadway Hall on Thursday, September 6th, with Dr. Johnson in the chair.

After the meeting had been called to order, and the minutes of the last meeting held in April read, Dr. Johnson stated that on account of a visit he was about to make to the Pacific coast he would not again be a candidate in the approaching council elections.

With Dr. A. Macdonald, the first vice-president, in the chair, the following resolution was carried unanimously: Moved by Dr. McPhedran, seconded by Dr. Cotton, That in view of the retirement of Dr. Johnson from the Medical Council, the thanks of this association be tendered him for his services during the past five years as member of the council.

Dr. Johnson thanked the members for this resolution and assumed the chair.

The following resolution was then carried unanimously: Moved by Dr. N. A. Powell, seconded by Dr. Spence, That in view of the retirement

of Dr. A. J. Johnson from the contest for the representation of this division in the Medical Council, the West Toronto Territorial Division, and the members here assembled, most cordially endorse the candidature of Dr. H. T. Macchell, and hereby express the hope that he may be returned without opposition.

After a discussion upon the subject of lodge and contract practice, and prescribing by druggists, the association adjourned to meet on Saturday, the 13th October, next.

As a result of the discussion on prescribing by druggists, the following committee was appointed to consider counter prescribing and repetition of prescriptions by druggists, and report at the next meeting: Drs. Powell, Machell, Hunter, Macdonald, Fotheringham, and Young.

GEO. H. CARVETH, Secretary.

Correspondence.

FRACTURE OF THE SPINE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—Following Dr. Welford's interesting paper on "Fracture-Dislocations of the Spinal Vertebræ," published in your last issue, I submit the report of a case which came under my observation three years ago.

S.K., æt. 35, carpenter, fell from a scaffold some thirty feet, striking upon his head and shoulder, and rendering him unconscious. Saw patient three hours after accident. Consciousness had returned. He expressed himself as feeling comfortable, with the exception of slight pain at the back of the neck. Pulse full, regular, without variation; breathing wholly diaphragmatic; motor paralysis complete from level of sixth cervical vertebræ; sensation normal to about seventh cervical, impaired for a few inches, and totally lost at level of second dorsal. Upon extension of spine with gentle rotation, crepitus was distinctly manifest, but no improvement of paralysis could be detected. Operative procedure was then suggested, as affording the only possible hope of relief.

A post-median incision showed the spine of the third cervical depressed and to the left of the median line, with fracture of the pedicle. The opposite lamina was then divided and the piece removed, revealing collapsed dura and complete laceration of the cord. No dislocation of the bodies of the vertebræ could be detected, nor any additional fracture. The closure and dressing of the wound completed our duty towards the patient, who expressed himself as being grateful for the exact prognosis which the operation enabled us to give. Death ensued in nine hours.

With the resources of modern surgery at our command, it appears that our duty is clearly indicated by the tone of the article previously referred to, and I cannot do better than repeat Dr. Welford's words: "Exploratory incisions in abdominal operations are to-day countenanced. . . . The operation could relieve any compression by removal of the posterior arches, and if laceration were present we would not be in any worse condition than before, with a great deal of doubt as to the prognosis removed."

Victoria, B.C.

ERNEST HALL.

LODGE PRACTICE.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—Although the “lodge” question has already received a considerable share of adverse criticism, at the risk of being tiresome, I desire to add a few more words in defence of a practice which, in itself, I have not yet found inconsistent with professional honor or dignity.

I believe it is the right of every citizen—physician included—to arrange his business engagements, to make and fulfil contracts, whether profitable or otherwise, without the necessity of consulting his business opponents, or of explaining his motives ; and I further believe it is the province of jealousy, and of jealousy alone, to question either the one or the other.

So long as contracting parties confine themselves strictly within the limits of their obligations, which are of mutual interests alone, no third party can have any moral right to interfere, especially if that interference be prompted by interests of a mercenary nature. But interference with the lodge contract on the ground that “they (lodge physicians) lessen the incomes of the members of the profession” is a scandalous confession of selfishness, unsuspected in the majority of our medical confrères. The above quotation, however true it may be in practice, will probably afford a startling theme for the reflection of the general reader ; but as a premiss in the contention against lodge practice, it is neither flattering nor over-credible to the author whom I quote from the JUNE PRACTITIONER.

My own contention is entirely for the principle embodied in the right to engage in business, whether under contract direct or implied, without the necessity of concurrence by a trades union, or a professional corporation, which is of itself a limitation of the rights of the individual, and any insinuation that I am engaged in the defence of unworthy conduct is as gratuitous as it is wide of the question involved. The multiplication of cases in point either real or fancied, when applied to lodge practice, has no greater weight against the principle than the same cases would have against the fundamental principles underlying the practice of medicine in general, and it is absurd to single out the “lodge” contract as if it were distinct from other contracts. Moreover, it is begging the whole question to assume that the “lodge” system constitutes a special field of practice outside the limits and uncontrolled by the ethics of general medicine.

For more than a year it has been the habit of certain peevish writers to assail lodge practice as “pernicious,” “unprofessional,” and the like, on the sole ground that this particular system, when put to the test of a trial, has proved to be a financial failure, antagonistic to the general profession, and open to the grossest abuses. Because the “lodge” has become the

synonym for disagreement, through the "pernicious practices" of certain reckless practitioners of medicine, it does not follow that the contract system is responsible for the trouble, nor that all other lodge physicians should be held equally guilty of unprofessional conduct. It would be quite as logical to assume that all medical men are felons because some members of the fraternity have been inmates of the penitentiary; equally so to say that because the statutes are daily transgressed, therefore our social system is at fault and every citizen a malefactor.

Failure! Antagonism! Abuses! are objections which apply to the whole field of medicine, but no one will probably be rash enough because of these conditions to desire the summary suspension of all medical practice. Ought not the lodge physician himself, who is chiefly concerned, to be considered the best judge of his financial success or failure? And may not uninvited enquiry into his private affairs, instead of convincing him of a determination to save him from pecuniary loss, be rather accepted by him as evidence of that selfish interest which in other spheres is justly set down to impudence?

That lodge practice is antagonistic to the general profession is indisputable on the same grounds that every physician is a business antagonist to his neighboring physician, but no amount of business antagonism justifies one in abusing the other, or ascribing to him unworthy motives for his conduct. That such unhappy conditions do, however, obtain is scarcely the fault of our medical system, but it is rather to be set down to a faulty breeding of some members of the profession, for which we cannot generously hold them personally responsible. Nor is business opposition alone responsible for all the abuses of lodge practice, for if, as "M.A., M.D.," has intimated, two or more medical men cannot meet in the same house without unseemly wrangling, there is certainly something more seriously involved than the system of medicine practised.

But the practice of medical science, however profound, cannot be satisfactorily conducted in direct opposition to the acknowledged rules of common politeness. And because some physicians unfortunately lack the instincts of gentlemen, it does not logically follow that their system of medicine is at fault, much less their medical confrères. Disregard by lodge physicians for the ethics of general practice, as applied to lodge work, ought rather to bring discredit upon themselves than upon a profession which, from defects of culture, they are not qualified to adorn.

The extreme, though possible, case drawn by "M.A., M.D.," is not a flattering commentary on the professional qualifications of medical men under his own observation, but it cannot prejudice lodge more than general practice, because no physician can become a lodge physician until he has first become a registered general practitioner. Strictures, therefore,

which apply to lodge practice apply equally to general practice, and any corrections which hope to reach the abuses of the lodge must necessarily be applied to the broader code of general medicine. Every physician being responsible to the College of Medicine for his professional conduct, gross irregularities of practice may be dealt with under the provisions of The Ontario Medical Act, and I believe any attempt to shift the onus of such irregularities upon inoffensive members of the profession ought in itself to be considered an infringement of professional rights as greatly to be denounced as any other abuse of professional privilege. Therefore I submit to all reasonable men that it would better accord with our ideas of medical ethics to hold individual members of the profession responsible for the abuses of their practice than it would by sweeping generalizations to maliciously stigmatize unoffending persons. From my own experience, I am unable to agree with Dr. Bibby that the lodge system is, in principle at least, a "modern outrage" or a "silly institution." That is wholly a matter of opinion, and of no concern to me or to the point for which I contend, though I half suspect the real outrage to consist in the doctor's reckless disregard for those professional amenities which are the acknowledged due to every physician, though he differ from us both in theory and practice.

I have neither the time nor the inclination to defend the extreme instances of "M.A., M.D.'s" imaginary creation. Every man professing the dignity of a name would be willing to assume responsibility for his own "dirty mess"; and though even that nameless gentleman may be congratulated on the elegance of his higher literary training, the cowardice of his concealment under a professional *nom de plume* is not less to be condemned than is that practice the defence of which he so much deplores.

A. C. BOWERMAN, M.B.

Picton, Ont., Aug. 27th, 1894.

Book Reviews.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on Medicine, Surgery, Gynæcology, Ophthalmology, etc. Edited by J. M. Keating, Colorado; Judson Daland, Philadelphia; J. Mitchell Bruce, London; and David W. Finlay, Aberdeen. Vol. III, Third series, 1893. J. B. Lippincott Co.

This volume contains about fifty clinics on various subjects, by professors and lecturers in the leading medical colleges of the States, Great Britain, and Canada. The illustrations are good, and the general clinics quite up to the average.

The subject of myxœdema, taken up in the former volume, is renewed in this by A. T. Davies, London. He reviews the history of the disease, and discusses the various methods of administering thyroid glands of sheep as treatment. The thyroids have been found to give good results when cooked and given by the mouth, the quantity varying from one-fourth to one-half a gland every day.

J. F. Goodhart, London, believes the usual method of treatment for empyema might be changed with advantage. He thinks the incision should be made more with regard to the site of the greatest quantity of pus than to the most dependent part of it. The cavity may be irrigated at first if there are any lymph clots, but frequent and prolonged irrigations tend to retard recovery. Excision of the ribs should be rather the exception, and drainage tubes should not be very large, or left in for a very long period.

Chronic urethritis and its consequences is the subject of the clinic by Dr Tuffier, Paris. He cites cases in which salpingitis, metritis, sterility, or the enforced removal of diseased parts of the utero-ovarian apparatus has followed coitus with men the subjects of a chronic urethral discharge. In most cases gonococci can be demonstrated in the discharge, and these set up the inflammations which are so harmful. He has come to the conclusion that a man should not marry who is the subject of such a discharge.

Dr. F. P. Henry, Philadelphia, thinks gonorrhœal rheumatism might better be termed urethral arthritis, since it may arise from non-specific urethral irritation, and because it differs, in certain important respects, from articular rheumatism. It is mostly seen in the male sex, and is not amenable to ordinary anti-rheumatic treatment. Potassium iodide seems to be the only useful drug, and the rest of the treatment must be of a surgical nature, such as the use of splints and bandages, and paracentesis of the joint when necessary.

Cataract is very fully described by Dr. F. B. Tiffany, Kansas City. Several plates, many of them the full size of the page, are given, illustrating the parts of the eye concerned in the change, and showing the various forms and degrees of cataract. Descriptions of each plate are given, besides the general diagnosis, prognosis, symptoms, and treatment of the disease.

INTERNATIONAL CLINICS. A quarterly of clinical lectures on Medicine, Surgery, Gynæcology, Ophthalmology, etc. Edited by Judson Daland, Philadelphia; J. Mitchell Bruce, London; and David W. Finlay, Aberdeen. Volume IV., Third Series, 1894. J. B. Lippincott Company, Philadelphia.

This quarter's list numbers about forty clinics, taken from the clinics given in various hospitals and colleges in Canada, England, and the States by the attending professors. They are practical in all their details, and are well illustrated throughout.

Diabetes mellitus is the subject of three clinics. Dieting the patient seems to be the principal method of treatment adopted, especially in early cases, sugars and starches being cut off as completely as possible, and the patient living on meats, fresh vegetables, and milk. Levulose, a new preparation of sugar, manufactured by Schering & Glatz, Germany, has been used in many cases with good results. Solis-Cohen, of Philadelphia, and Saundby, of London, speak very highly of it, they having found it supply the place of sugar in the animal economy, without increasing the amount of sugar in the urine. Tyson, Philadelphia, recommends soya-bean and gluten flour as substitutes for ordinary flour, and all prescribe opium, generally as codeine, in the more acute cases.

F. B. Tiffany, Kansas city, finishes his clinics on cataract in this volume. He describes the steps usually followed in performing the two principal modes of operation, and his remarks are illustrated by several engravings of instruments and plans of operation.

Chronic laryngitis is taken up by G. Macdonald, London. He believes that more attention should be paid to the setting right of any troubles in the nasal passages first, since until that is done the laryngitis will probably be incurable, or will recur in a short time. He also thinks that instruction as to the proper use of the voice would lessen the strain on the inflamed parts, and so hasten recovery. He advises steam inhalations, with tinct. benzoin co., oil of cubebs or eucalyptus, or the application by brush or spray of zinc chloride gr. xx.-xxx. to 1 oz. water. Ferri perchlor. 2 drs. to 1 oz., or argenti nitras gr. xx.-xxx. to 1 oz., or insufflations gr. ss. of freshly-ground matico leaves, catechu powder, or alum. Cold compresses, or hot ones, when less irritating to the throat, are mentioned as useful adjuncts to the above remedies.

Medical Items.

DR. W. O. STEWART has been appointed physician to the Ontario Agricultural College, Guelph.

DRS. W. BRITTON, John L. Davidson, A. McPhedran, and John Caven returned from Europe to Toronto early in September.

DR. CHAS. E. COCHRANE, of Omemee, has removed to Vancouver, B.C., where he has formed a partnership with Dr. Metherell.

DR. H. A. BRUCE (Tor., '92) has returned to Toronto, after spending a year as surgeon on the C.P.R. steamer, Empress of India.

At the recent annual meeting of the College of Physicians and Surgeons, Dr. Jones, of Winnipeg, was elected president, and Dr. Gray, of the same city, secretary.

DR. L. MACKECHNIE (Tor., '92), who has been practising in Victoria, B.C., has recently gone to Philadelphia, where he will take a six months' post-graduate course.

DR. HERBERT JAMES HAMILTON (Tor., '86) has recently returned from Europe, where he spent two years at post-graduate work in England and on the continent.

DR. S. G. PARKER, 234 Carlton street, Toronto, who had been taking a holiday in Great Britain, was married in Edinburgh, August 20th, and has returned with his bride to Toronto, and will reside at 539 Sherbourne street.

A STATUE to Claude Bernard will be unveiled at Lyons on October 26th. The French Academy has appointed MM. J. Bertrand and Brunetière to represent it on the occasion. The Académie des Sciences will be represented by MM. Chauveau and Bouchard. As the first French Congress of Internal Medicine will be in session in Lyons at the time, it is expected that the ceremony will be exceptionally brilliant.

THE SEMMELWEISS INTERNATIONAL MEMORIAL.—On September 2nd, prior to the session of the International Congress of Hygiene at Buda-Pesth, in the afternoon, Professor Huppe, of Prague University, delivered an oration on Semmelweiss at the Academy of Sciences, after which carriages in waiting conveyed the guests to the site of the memorial, and Professor Kezmarszky, the Chairman of the Committee, unveiled the statue. Dr. Duka was

requested, in the absence of Sir Spencer Wells, to place a laurel wreath upon the statue, and to deliver an address in English.

FOSSIL MICROBES.—In a recent communication to the Académie des Sciences, MM. Reynault and Bertrand stated that, in examining sections of coprolites of the Permian period, they noted the presence of a considerable quantity of microbes of different kinds—isolated rodlets and diplo-bacilli, strepto-bacilli, vibrios, and filaments. There were also mucedinea, with mycelium and detached spores. The Permian bacterium is said not to resemble any of the forms known to exist at present. MM. Reynault and Bertrand throw out the suggestion that possibly these may be only one species of bacterium which is polymorphic.

ANTIVACCINATION FALSEHOODS.—We have received a circular letter of invitation, which is being widely distributed, to a demonstration to be held “under the auspices of the . . . London Society for the Abolition of Compulsory Vaccination,” at Mile End, on September 4th. The following data are given as regards Leicester in respect of the smallpox outbreak of 1892-93 :

Per Million Living.

The death rate from smallpox of the <i>revaccinated</i> was. . . .	270
“ “ “ vaccinated.	159
“ “ “ non-vaccinated.	109 only.

These data are absolutely and scandalously false and misleading. There were no deaths in the period stated among “*revaccinated*” persons. We fail to see, therefore, how there can be alleged a death rate at all, much less 270 deaths per million in “*revaccinated*” individuals. The deaths among the “*non-vaccinated*” to give the above rate have been taken *on the whole population over 10 years of age*, and those on the “*vaccinated*” on the *population under 10 years of age*. The results are perfectly absurd, and once more wilfully misleading. In regard to the further fabricated falsehoods as to Leicester, as a matter of fact the death rates per million of the three classes, on the total estimated population of Leicester in 1893, were as follows¹:

<i>Revaccinated</i>	0.0 per million.
<i>Vaccinated</i>	5.4 “ “
<i>Non-vaccinated</i>	102.7 “ “

The circular goes on to show that the infantile death rate in Mile End in 1893 was below that of London as a whole. What has that to do with the matter at issue? What of Portland Town, Lisson Grove, and Mr. Wynter Blyth's demonstrations of the need and value of vaccination?—*British Medical Journal*.

NON NOCERE—HARM NOT.—Professor A. Jacobi delivered an address having the suggestive title of “Non Nocere.” There was a neglect in the study of special branches at the expense of progress in general medicine. Many of the so-called specialists were untrained men, and others calling themselves scientific men were given to accepting and even advocating proprietary medicines and food nostrums, encouraging fads of sensational treatment of tuberculosis, cholera, and senility. Harm was also done by rash surgical and gynæcological interference, while overdosing was just as bad, as well as the

so-called expectant treatment. The latter was often a convenient cover for incompetency and ignorance. Harm was often done by neglecting intubation and tracheotomy at critical junctures. Diseases like pertussis, which could be shortened, must be treated to prevent complications ; eruptive diseases be watched and treated to avoid mental disturbance or collapse. Pneumonia may require venesection to save life. In convalescence strong stimulants and great care are needed, and so-called maximum doses were safeguards more for the physician than the patient. The over- and underfeeding of infants, the evil effects of excessive sugar in their foods, associated with acid catarrh, were discussed, and sterilized milk as the only food was characterized as highly objectionable. The neglect of asphyxia neonatorum led to cerebral disease and idiocy, and by want of care in asepsis wound-infection in the newborn often occurred. The so-called chronic constipation in infants was due to extra length of the sigmoid flexure. Unless this was correctly treated, enteritis and auto-infection with fever followed. The difficulty corrected itself during the sixth or seventh year. Harm was done in diphtheria by forced applications to struggling children. He had collected thirty-three cases of craniotomy for idiocy and macrocephalus, and found that results were always negative. A skull in Sach's possession proved the existence of contraction rather than enlargement of cranium as the result of operation.—*Provincial Medical Journal*.

RESUSCITATION FROM ASPHYXIA.—While the drowning season is "on," it may be useful to familiarize one's self with Dr. Laborde's method of restoring the respiratory reflex. It is so simple—using an ordinary tongue forceps, such as is on hand during chloroform or ether inhalation, the tongue is well pulled forwards and regular rhythmical movements are given to it—that it is proposed to issue some plain directions that can be posted in every hospital and be in the hands of every midwife, or any one who may be liable to see asphyxia, such as those who give anæsthetics and those called to cases of drowning, etc. It has been tried a great deal in France in the last two years in all sorts of cases of asphyxia, by drowning, electric shock, lightning stroke, and in the cases of apparent death in the newly-born. Some sixty-three cases are given where patients were recalled to life by this method.

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INTESTINAL OBSTRUCTION FOLLOWING OPERATION IN WHICH THE PERITONEAL CAVITY IS OPENED.*

BY GEORGE H. ROHÉ, M.D.,

CATONSVILLE, MD.

Fellows of the American Association of Obstetricians and Gynæcologists :

PERMIT me to here formally express my appreciation of the honor done me in electing me to the distinguished position of your presiding officer. I am not conscious of having done anything to merit this high distinction, and can only attribute your action to personal friendship. For the honor I give you my heartfelt thanks.

I may congratulate the association upon the excellent prospects of the present meeting. The rich and varied programme before you shows that our indefatigable secretary has not allowed the Fellows to rest upon laurels achieved in the past, but has stimulated them to continued work. The entertainments offered by our generous hosts are sufficiently numer

*The President's address before the American Association of Obstetricians and Gynæcologists, September 20th, 1894.

ous and diversified to satisfy the tastes even of those who might come for diversion only. Happily, however, we have none such in this association. Our resident Fellows in this beautiful city had prepared such an elaborate festival programme that the Executive Council, in the interest of science, was compelled to cut it down to a point which would leave *some* time for the reading of papers and the discussions.

Early in the present year an invitation was received through our Honorary Fellow, Dr. August Martin, Secretary of the Berlin Obstetrical and Gynæcological Society, requesting the attendance of an official delegate from this association at the celebration of the fiftieth anniversary of the founding of the Berlin society. By a vote of the Executive Council the president was appointed as your representative, and attended the meeting in Berlin in May last. The courtesies extended by the Berlin Society were extremely cordial and graceful, and the action of this association in accepting the invitation was warmly appreciated. I was highly gratified to find that the work and the workers of this association are fully recognized and admired by our European colleagues.

While we have reason for gratification at the constant accessions to our ranks, we have to mourn this year the passing of one of our founders, Dr. Hampton Eugene Hill, of Maine, and of two of our most distinguished Honorary Fellows, Dr. Alexander Dunlap, of Springfield, O., and Dr. Arthur Wellesley Edis, of London.

Dr. Dunlap was a veteran abdominal surgeon. Those who, at our Cincinnati meeting, had the privilege of hearing his own account of his first ovariectomy, done just fifty-one years ago,* can appreciate what courage was necessary in those days to open the abdomen.

Dr. Edis was well known to us all through his admirable manual on the "Diseases of Women" and other publications on gynæcological subjects. He also held, at one time, the distinguished position of president of the British Gynæcological Society.

Dr. Hill was a founder and enthusiastic Fellow of this association. He was a modest gentleman and a fearless and ready surgeon, fulfilling the demand of Dr. Dunlap, that a surgeon must be a man who can always "keep himself perfectly calm and his mind free from excitement under all circumstances." Those who have heard Dr. Hill relate his experiences in abdominal surgery realize that he was such a man. His record, perhaps unique, of twenty-five recoveries in the first series of twenty-six operations, is one that all of us who are less gifted and less successful may well envy.

The temptation is strong to linger over the details of these noble lives and draw from them lessons to guide and uplift us who remain, but this is a duty that must be left to others more competent.

The choice of a subject upon which to address you from the chair has

*September 17th, 1843.

been difficult. Not, indeed, from a paucity of topics demanding discussion, but from a feeling that any attempt on my part to offer *ex cathedra* opinions would be presumptuous. I may be pardoned, however, for briefly drawing your attention to the frequent occurrence of

INTESTINAL OBSTRUCTION FOLLOWING OPERATIONS IN WHICH THE PERITONEAL CAVITY IS OPENED.

Obstruction of the bowels causes between 1 and 2 per cent. of the deaths following ovariectomy and other operations involving opening of the peritoneal cavity. Sir Spencer Wells lost 11 out of his first series of 1,000 cases of ovariectomy from this cause (1.1 per cent.). Fritsch¹ places his mortality from ileus post-laparotomy at 1.6 per cent. Klotz² has reported 31 cases of intestinal obstruction with 5 deaths due to this complication in a series of 421 abdominal sections and 148 vaginal extirpations of the uterus. I have been able to collect in the literature and from personal communications no fewer than 75 deaths from this cause. While this number seems large, it probably represents less than half of the deaths properly attributable to this accident, for there can be no doubt that not a few fatal cases of peritonitis and intractable vomiting after laparotomy are really cases of obstruction of the bowels.

Secondary or post-operative intestinal obstruction may be roughly divided into two classes of cases, one due to mechanical causes—adhesions, peritoneal bands, volvulus, accidental fixation by sutures, etc., and perhaps compression in exudation masses—and another due to paralysis of peristaltic movement of the intestines following sepsis or injury to the nerve supply of the muscular coat. The obstruction may be acute—*i.e.*, occur immediately after or within a few weeks subsequent to the operation—or it may develop gradually, and not become complete until months or years afterward.

The majority of cases in which the cause of the obstruction was ascertained by operation *intra vitam* or by necropsy have been found to be due to abnormal fixation of the intestines by adhesions, or to compression by peritoneal cords or bands inflammatory in origin. The statement is attributed to Olshausen that obstruction after ovariectomy is always due to adhesions between the bowel and the pedicle. A striking instance of this form is related by Sir Spencer Wells.³ I have, however, observed a case in the practice of the late Prof. Erich, of Baltimore, where the small intestine was doubled upon itself and so firmly adherent that the gut was entirely impervious. Similar cases have been reported by Skutsch and G. M. Tuttle⁴ after the removal of the uterine appendages. Adhesions of a knuckle of bowel to the abdominal incision or to other portions of the abdominal wall have frequently been found to be the cause of the

obstruction, the abnormal fixation causing acute flexure of the intestinal tube. Any hindrance to the passage of the contents of the bowel at the point of flexure causes dilatation above and consequent increase of the degree of flexion. When this occurs there is at first increased peristalsis, but if the obstruction is not soon overcome the circulation is interfered with, dilatation of the bowel with paralysis of its walls follows, and the anatomical picture of the obstruction is complete.

Sir Spencer Wells⁵ illustrates another form of obstruction in which a coil of small intestine sinks into Douglas' cul-de-sac and becomes fixed there by adhesions. Krug has reported a case in which the descending colon was found glued fast at an angle to the posterior surface of the uterus.⁶ Our distinguished Fellow, J. F. W. Ross, has reported a case where obstruction occurred five weeks after a complete abdominal hysterectomy. "After death it was found that a small portion of intestine had become adherent to the abdominal incision behind the edge of the omentum, and that another loop had slipped through above this adhesion between the bowel behind and the abdominal wall in front, and had thus become obstructed." Secondary operation, which would doubtless have given relief, was advised, but was rejected by the friends of the patient.

Fritsch mentions a case where a fold of the bowel was caught under a suture, and another in which the bowel was found in the incision between two sutures. He thinks the bowel was forced between the separated edges of the incision during retching and vomiting. I should not have believed this possible had I not seen how widely apart sutures are placed by some of our European colleagues. Sir Spencer Wells "heard of a case where a coil of intestine slipped through one of the loops of wire used as sutures for the wound, and was tightly compressed when the wire was fastened." Our Fellow, Joseph Price,⁷ quotes an interesting case from Louis, where an adherent ovarian cyst, emptied by the trocar, so dragged upon the bowel as to cause obstruction. The opinion is expressed by Price that some cases of obstruction post-laparotomiam are due to leaving old bowel adhesions undisturbed at the time of operation. Fritsch seems to lean to a similar view. My friend, Prof. B. B. Browne, of Baltimore, has recently given me the particulars of a case occurring in his practice, in which death ultimately resulted from an obstruction undoubtedly present before operation. The symptoms in this case pointed to bowel obstruction, but an acute inflammatory condition of the uterine appendages was found which was believed to account for the symptoms. Some days after the section evidences of obstruction presented themselves and led to a secondary laparotomy. Some adhesions were found, which were released, and the patient improved. She subsequently died, however, and on post-mortem examination the bowel was found swung over an old peritoneal cord, causing

sufficient obstruction to obliterate the lumen of the gut. I. S. Stone, Fellow of this association, has quite lately reported a similar case.⁸ Lauenstein⁹ has described in an interesting manner the varied and curious forms assumed by intestinal and omental bands and adhesions, and has indicated the only rational method of treating them.

Among the cases of constriction by peritoneal bands, one related to me by Dr. Charles Jacobs, of Brussels, deserves to be mentioned. Here the constricting band consisted of the elongated adhesion between the uterus and anterior abdominal wall following ventrofixation.

Some cases have been observed in which the obstruction was due to an internal hernia through an opening in the omentum. Skene Keith reports a somewhat apocryphal case in which obstruction was produced by an epiploic appendix passing through one of the side holes of a drainage tube. After removing the tube the obstruction was relieved.

Volvulus sometimes occurs after abdominal section, but probably after some previous adhesion or constriction of the bowel. Two cases reported by Nieberding¹⁰ illustrate this. In one case a fatal volvulus of the small intestine occurred after an ovariectomy. During the operation a portion of adherent omentum was excised, and at the post-mortem examination it was found that the raw surface of the omental stump had become adherent to a loop of the small intestine and that a volvulus existed above the point of fixation. In another case, in which the omentum was very short, symptoms of acute obstruction set in on the second day. Ordinary treatment being of no avail, the incision was reopened and a coil of intestine found adherent to the margin of the wound. After separating this a volvulus was found, which was untwisted. The patient subsequently died of peritonitis, which the reporter attributed to the obstruction.

There seems no question that by far the larger proportion of cases of post-operative intestinal obstruction are due to adhesions of the intestines to each other, to the abdominal walls, or to other viscera. This being so it becomes necessary to inquire what causes the adhesions, and if these can be prevented. Sepsis, destruction or separation of the peritoneum, the use of strong chemical antiseptics in the abdominal cavity, rough handling of the visceral or parietal peritoneum by sponges, hands, or instruments, prolonged exposure of the peritoneum to the air, and the use of certain suture materials have all, in turn, been accused of producing adhesions. Experiments and clinical observation have, however, shown that neither of these conditions is sufficient to account for all cases. It is well known that intestinal or omental adhesions to the margins of the incision are found in nearly every case in which the abdomen is opened subsequent to laparotomy, and that they occur in cases in which all the above-mentioned conditions can be excluded. On the other hand, Küstner has reported a case

showing strikingly that adhesions sometimes do not occur where they might reasonably be expected. He removed a very large tumor having firm adhesions to parietal peritoneum, omentum, bladder, fundus uteri, broad ligament, and sigmoid flexure. The adhesions were separated by the fingers and by the thermo-cautery. The coils of intestine were adherent and matted together. These were all carefully separated. Fourteen months later a secondary laparotomy for ventral hernia showed an absence of adhesions, either of the intestines to each other, to the parietes, or to the other abdominal viscera.

The symptoms of intestinal obstruction post-laparotomiam are essentially the same as those of primary obstruction. They are, however, often masked by pain, vomiting, and tympanites—so frequently present after abdominal operations without being significative of obstruction. Unless the obstruction is due to some untoward occurrence in the technique, the significant symptoms are not likely to be present for several days subsequent to the operation. If a patient does well for three or four days or longer after an abdominal section or vaginal extirpation, and is then suddenly attacked by pain followed by vomiting, tympanites, and inability to pass *fæces* and flatus, the diagnosis of intestinal obstruction is probable. If the vomiting becomes *fæcal*, the pulse rapid, the urine scanty, and symptoms of collapse set in, the diagnosis becomes reasonably certain. Unfortunately, however, all these symptoms are not uniformly present in obstruction. When the obstruction is high up in the small intestine *fæcal* vomiting is usually absent, and distension is likewise less marked. In these cases, also, the bowels may move several times after the pain begins, so that the diagnosis may be more or less uncertain.

Recent observations have furnished additional data upon which to base an opinion. The late Prof. Von Wahl,¹¹ of Dorpat, first called attention to the occurrence of local distension of the bowel above the point of occlusion in mechanical obstruction. This distension begins at the point of obstruction and extends upward along the course of the bowel. In mechanical obstruction, therefore, if the case can be observed from the beginning, there will be an elastic swelling localized at a point of the abdomen and gradually enlarging, the direction of increase in size being along the course of the constricted bowel above the constriction. The distension is attributed to rapid decomposition of the arrested intestinal contents. Coincident with this local meteorism is an increased peristaltic movement of the bowel, also above the obstruction, especially insisted upon by Obalinski¹² and Schlange.¹³ The observations of Von Wahl have been experimentally confirmed by Von Zoege-Manteuffel¹⁴ and Kader.¹⁵ Obalinski and James Israel¹⁶ have also proven the clinical value of Von Wahl's sign. Obalinski lays great stress upon the accu-

rate observation of these symptoms, especially early in the course of the trouble. In the later stages, particularly if septic peritonitis with paresis of the intestinal walls has occurred, these distinguishing signs are no longer available. In cases of obstruction due to paralysis of the intestine from the beginning (probably always a consequence of septic peritonitis) these symptoms are not present. Here there is a uniform globular distension of the abdomen without movement of the intestines, and without noticeable contours of the bowels through the abdominal walls.

An additional diagnostic sign, according to Rosenbach, Rosin, and others,¹⁷ is furnished by the urinary reaction. It is claimed that in complete obstruction of the ileum there is always indican in the urine. In obstruction to the colon or high up in the small intestine this reaction is usually not present. The reaction is obtained by boiling a small quantity of the urine in a test tube and adding nitric acid *guttatim*. The urine turns to a Burgundy red color, and a similarly colored precipitate is thrown down. This has been shown by Rosin to be a mixture of the urinary coloring matters known as indigo blue, indigo red, and indigo brown. If urine yielding this reaction is shaken, a violet-colored foam is produced. Rosenbach attributes great prognostic significance to this reaction. So long as it remains the case is a grave one. If, after operation for relief of the obstruction, the reaction persists, the obstruction has not been removed. In cases where the obstruction is relieved the reaction disappears within twenty-four hours. Our Fellow, J. H. Branham,¹⁸ has recently confirmed Rosenbach's assertion. While this sign must be regarded as a very important one, it is not absolutely pathognomonic, as a similar reaction occurs in some other morbid conditions.

The prognosis of primary intestinal obstruction is sufficiently grave. Following closely upon an operation so serious in itself as abdominal section or vaginal extirpation of the uterus, this gravity is enormously increased. The abdominal surgeon should therefore be prepared to promptly recognize and appropriately treat this unwelcome complication.

Fitz¹⁹ expresses the result of much unfortunate experience when he says: "In the light of exact knowledge nearly all cases of acute mechanical intestinal obstruction die unless relieved by surgical interference." And as a corollary may be quoted the opinion of Senn²⁰: "Intestinal obstruction is a surgical lesion in every sense of the word, and should be treated from the very beginning upon common-sense surgical principles." This does not mean, of course, that the knife should be resorted to at once in the treatment of this condition, but that when other means fail to give relief the surgeon should not hesitate to operate, as delay in cases, not otherwise curable, always increases the danger of operative measures. Bearing upon this point Senn says: "An abdominal section in the treat-

ment of intestinal obstruction is always necessarily attended by severe shock, and it is therefore of the utmost importance to perform the operation at a time when the organs of circulation and the nervous system are still in a condition to successfully resist the immediate effects of the operation."

However, the boldest surgeon hesitates to resort to such a serious operation as abdominal section for intestinal obstruction, unless the diagnosis of mechanical obstruction is perfectly clear. Some cases are so plain in their indications that the only honest choice is to operate or do nothing, and to a surgeon the latter would hardly seem an honest alternative. But cases occur where the nature of the obstruction is not entirely clear. The symptoms may point to obstruction by means of adhesions, peritoneal bands, or volvulus, and yet there is a possibility that there may be simply functional obstruction. In such cases other means may be tried until it is found that they are ineffective.

Little need be said here of the so-called "medical treatment" of intestinal obstruction. If any one chooses to treat such cases with opium or drastic purgatives, I do not envy him the results. But there are certain procedures, not strictly surgical, which are frequently indicated, and, though they are not often curative, certainly give temporary relief. Such measures are stomach washing, rectal inflation of gas or air, and injection of fluids.

Stomach washing was first recommended in intestinal obstruction by Kussmaul to relieve the distressing vomiting. Some mild antiseptic lotion containing boric acid should be used. The lavage may be repeated every four or six hours, as the vomiting or distension demands. It has been found that considerable gas is removed with the fluid contents of the stomach. Some of the matters in the upper portion of the intestinal tube are likewise siphoned out, and in this way relief always follows the washing out. At the same time it must be remembered that stomach lavage is only palliative and not curative in established mechanical obstruction.

Klotz²¹ has had much success in treating acute obstruction following abdominal section by the following method. As soon as symptoms indicating obstruction appear, he washes out the stomach with from four to six quarts of warm salt solution. Should this fail to relieve the symptoms he repeats it, and then passes into the stomach through the tube a large dose (one and a half to two ounces) of castor oil. In all cases so treated the active peristaltic movements set up caused passage of flatus and fæces within ten hours. Evidently it is only in cases of fresh and friable adhesions that this method can be successful.

Rectal injections of water or air may at times be curative when the obstruction is due to intussusception, volvulus, or to soft adhesions of the

lower portion of the intestine, but where the obstruction is due to cords or bands they can manifestly be of no avail. They should therefore not be pushed beyond a reasonable trial. Care must be taken not to use too much pressure in making rectal injections, for fear of rupturing the bowel. Attempts to force the ileo-cæcal valve must be regarded always as ill-advised, in spite of the claim sometimes made that fluids can be made to pass this gateway between the large and small intestine in the reverse direction. Too much care cannot be used in passing a rectal tube high up into the colon. I have seen one instance of perforation of the sigmoid flexure where this was attempted.

The rational treatment of intestinal obstruction following abdominal section is to reopen the abdomen either in the line of the first incision or at some other point, seek for the place of obstruction, relieve the same by separating adhesions, dividing constricting or restraining bands, or untwisting a volvulus. If the gut be much distended, an incision to let out the gas and fluid fæces may be made and the bowel afterward carefully sutured. Gangrenous intestine must be resected and the ends joined by suture or Murphy's button. At times it may be advisable to do colotomy, but the readiness with which the ends of resected intestine can be joined with Dr. Murphy's excellent device will probably render the operation of colotomy for this condition much less frequent than formerly. If the obstruction is due to a volvulus, it would probably be always advisable to resect the twisted portion of the gut, as the volvulus is extremely likely to recur. Keith advises that the long mesentery, always present in volvulus, be shortened by folding it upon itself parallel to the gut, and keeping it in place by a few stitches. A case has been reported by A. H. Cordier,²² a Fellow of this association, in which there was constriction of intestine by a peritoneal band, followed by rupture of the gut. Abdominal section was done, the stricture relieved, and an anastomosis made with Murphy's button. The patient recovered.

When practicable, it is probably always better to make the incision in the middle line, as it permits more thorough and ready exploration. Branham advises that when the abdomen is opened search should first be made for the obstruction in the iliac regions, as here obstruction is most likely to occur. If not found in either of the iliac fossæ, and if it cannot be located by local distension, the entire length of the intestine must be passed through the fingers until the constriction is found. As it not infrequently happens that there is more than one point of constriction, the examination should be thorough.

The distension and congestion of the intestine above and its pale, empty, and flaccid condition below the constriction will often enable one to find the obstruction readily. Eventration of the intestines should be

avoided, if possible, although if the obstruction cannot be otherwise discovered this becomes necessary.

It goes without saying in this audience that the most scrupulous attention must be paid to asepsis during the operation, and that the peritoneal cavity should be thoroughly flushed and drained after relieving the obstruction.

The question naturally presents itself whether anything can be done to prevent the frequent recurrence of intestinal obstruction post-laparotomiam. As the obstruction is so often dependent upon adhesions, attempts have been made to prevent those. Dr. Robert T. Morris,²³ one of our Fellows, proposes to accomplish this by covering denuded peritoneal surfaces with a film of aristol powder, which he claims prevents subsequent adhesions. The evidence hitherto furnished that aristol accomplishes this seems to me insufficient, but should stimulate to further experiment. August Martin wipes out the pelvic cavity with a sponge saturated with sterilized olive oil just before closing the incision after a laparotomy. I have not been able to learn whether adhesions are prevented by this procedure. To me it seems a doubtful practice. Obalinski produced purulent peritonitis in a rabbit in which he had used the sterilized oil.

Cases of so-called paralytic obstruction are usually to septic peritonitis. Here operation is rarely of service, although a case reported by W. W. Keen indicates that even in these cases one need not give up all hope. Keen did a laparotomy, incised the greatly distended large intestine and emptied it of its contents, flushed and drained the abdomen, and gave strychnine. The patient recovered.

In conclusion, permit me to quote the apt remark of Fritsch²⁴: "Fixed rules governing the treatment of intestinal obstruction following peritoneal operations cannot be established. But the greater our experience in these cases, the more readily do we lean toward operation. Not, it must be said, that the results have been favorable hitherto, but because no other treatment is of any value in cases of severe obstruction."

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SOME FACTS AND FALLACIES IN MEDICINE.*

BY PROF. R. A. REEVE, B.A., M.D.

IN the name of the Medical Faculty we welcome, this evening, not only those who return to these halls, but those who now begin the study of medicine.

You enter a profession which has a history as well as a future, and whose present status has doubtless been an attraction. It is styled, as you know, a noble profession, and it has on its bead-roll many worthies to whom the world will ever be indebted for their deeds of heroic self-sacrifice and their unselfish devotion to the best interests of mankind. If the world of science reveres a Kepler, Columbus, Bacon, Newton, Davy, Cuvier, Humboldt, Franklin, and Faraday, we can point with equal pride to a Harvey, Hunter, Jenner, Simpson, Donders, Helmholtz, Pasteur, Lister, Koch, whose work has been of untold value to our race, and will be a priceless boon for all time. But I must needs remind you that in all the walks of life there is scope for the play of noble qualities, and that we have no monopoly. On the other hand, we must own that in our ranks have been those whose motives were sordid, and whose ways were not of the light, and hirelings of the baser sort for whom we have to bear the shame.

To the undergraduates let me say that in this institution—and it is the only one for which I am qualified to speak—anatomy is taught with due regard to its fundamental character, and at the same time as a sort of fine art, with its various branches of special interest to one and another. This subject, which is a sort of bugbear to not a few, akin to mathematics, but, in reality, as valuable to the medico as the latter is to the civil engineer, will, I am confident, be presented in a manner befitting the exceptional facilities here provided. More than that need not be said. Stereotyped methods have been discarded, except where utility has proved their right to abide. If you give the heed to your dissections and demonstrations that their importance demands, and that the public will to dissecting you later on, you will not be sorry for your pains.

* Abstract of opening address, University of Toronto Medical Faculty, Tuesday, June 2nd, 1894.

Chemistry in a high degree provides that combination of observation and experiment that together constitute a leading avenue to knowledge. By its magic wand, to which nature bows submissively, things which she has joined together are forever dis severed, and, in turn, complex products are built up to cure the ills or minister to the well-being and comfort of mankind. You will observe the University has provided the long-expected domicile for so queenly a science, where, we doubt not, you will soon enter with zest upon your studies. We trust it may be the lot of some of you to reflect credit on your *alma mater* by original research in this department, the importance of which was dwelt upon by my predecessor of last year.

A number of years ago, when the latest incumbent of the chair of Natural History gave his inaugural address, he chose for discussion those infinitesimal forms of life that cling closely to the dividing line between the animal and vegetable kingdoms. As was natural in a mixed audience, there were those who looked askance at the selection made. But he was wiser and more prescient than they, and perhaps builded better than he knew, for on that occasion he laid the foundation of the future biological institute in which we are gathered, and over which he has presided so successfully. His department, while necessarily an integral part of University work, is an essential element in a system of medical education, and will be enjoyed and utilized by yourselves with a growing appreciation of its increasing value. This is the science that has given us asepsis in surgery; immunity, with all that it implies in preventive medicine; the new antidotal therapy that stamps an era in treatment; and has also laid us under deep obligation for the help given clinical experience in dispelling that sort of fatalism incident to the older views of heredity, and thus largely robbing phthisis and malignant disease of their horrors.

Embryology also, which is here taught as an important department of biology, and which, by the way, Leuwenh  ek, in the seventeenth century, put to so good use in his studies and theses, demands your careful attention. For it is not only a sort of connecting link between anatomy, physiology, and pathology, but it is proving practically useful in the treatment, as well as the study, of disease.

As an evidence that this institution aims at laying broad and deep the foundations of a truly scientific education, allusion must be made to a short course on the history of medicine in its different epochs and phases, to be given by members of the Faculty. This is in accord with the most recent views on the higher education which a university should furnish. This series, it is believed, will prove both an inspiration and a revelation to not a few.

This is a happy juncture for those of you who are finishing your

systematic course, when, owing largely to the great strides made of late in biology, the newer methods in chemistry and microscopy, and the steady advances in pathology, a more scientific and satisfactory basis has been laid for etiology, diagnosis, and therapeutics. A new meaning and character have been given to inflammation, suppuration, and fever. And instead of holding diseases as entities, a great step has been made towards settling the entities of disease : for example, meningitis, pleuritis, and otitis become congeners by virtue of the pneumococcus.

But you enter the profession at a time when, despite its great achievements and high status, there is ample scope for research and discovery. There are many vexed questions to be settled, and you will have the incentive and stimulus to aid in their solution. And when there is nought left but to test for yourselves the validity of your title deeds to the vast estate of knowledge which is your heritage, you will have plenty of work for your spare energies.

Some years ago, when going through the Rockies with a number of medicoes, with memories for a lifetime crowded into a few hours amid earth's grandest scenery, my eye caught the iridescent gleam from a strand spun by some daring arachnid between two ledges over a deep chasm, and this veriest trifle of a fact became mine. There was food for thought in it, and I would not lose it. So, though there will be great depths of mysteries and lofty heights of truth before you to explore, let me urge you to keep an open mind, observant eye, and right attitude to catch the lesser facts by the way.

We hear a good deal said against empiricism in these days, but it has had its proper time and place, and it is quackery, rather, which should be treated with scorn. Empiricism may be likened to the makeshift trestle bridge over a morass on our great C.P.R., which, resting on the elastic crust, serves for a time and for ordinary purposes, but which one day gives way beneath some great emergency train. Then, not until the abutments are builded to the surface from the rock bed deep down on which they rest, can there be a solid highway for commerce. So is empiricism, which is apt to rest upon uncertain ground, is more set upon the end than mindful of the means, and prefers to jump at conclusions rather than, like science, to sound the depths to be passed over and laboriously fill up the pitfalls of ignorance. We would fain deny that the profession has been bound too much by traditional views, and that we are yet tied by some that are unworthy of this age of light and leading ; but we must not unduly decry or undervalue empiricism, which has done much for medicine, and has sometimes, like instinct, proved a better guide to correct practice than the hasty deductions of science.

It is no light task to play the rôle of Healer. Little wonder that many

of those who begin the study of medicine give it up and never qualify as practitioners, and that not a few retire from the arena after a brief trial at arms with their challenged enemy.

Disease is always something more than the changes we can yet recognize and describe in any organ or function, and our first aim should be to gauge the force and trend of the undercurrent of abnormal action beneath the outward expressions and symptoms.

These are facts, and facts in medicine—facts which are truths. But hypotheses are not facts, and statements are not facts, as I once heard Hughlings Jackson say, quietly, but decidedly. Hence, by virtue of faulty observation and unsound or prejudiced judgment, so-called “false” facts prevail, which one has from time to time to unlearn and get rid of. Another difficulty that meets the young practitioner arises from dogmatism in author, teacher, or leader. A case in point is that of Syme, the eminent Scotch surgeon, who, after a trial of iridectomy in glaucoma, condemned it, and put it under the ban of his great name. But his were “false” facts, as the relief of untold suffering by the operation since his day attests.

The relation of the mental state to the physical is a subject that forces the attention of the physician in this era of neurasthenia and the reflexes, and gives the clue to all sorts of perplexing possibilities. John Hunter asserted, 1786-87 : “I am confident I can fix my attention on any part until I have a sensation in that part.” And this is the gist of what is now known of the influence of expectant attention and the imagination.

If any one doubts the influence of mind over matter, let him study the effects, direct and remote, of the emotions in their full bearing on tissue and function, and solve the riddle of somnambulism and mind-reading. Let him analyze that weird state, hypnotism, where the higher control centres seem to resign their regal sway, the *ego* is degraded, and personality is lost. Let him try to fathom that nondescript, hysteria, which so often throws such a false light over the picture of disease. We greet psychology, the latest of the natural sciences, as an ally, because mentality and medicine are closely related, and she takes hold of such practical matters as the relation of crime to disease, and deals with the correlated mental and physical growth of childhood, its dangers and safeguards. The methods of the kindergarten are not beneath her notice and criticism, and her voice of wisdom is heard within the halls of learning.

Besides the various anomalies and complications that may occur in the course of disease or after operation, there are many byways of fallacy to lead the practitioner astray, such as the subtle, yet far-reaching influences of heredity, the insidious, yet potent effects of habit, and idiosyncrasy. Disease, like an enemy, is often in ambush, decoying or misleading the

unwary or unskilled by feints here and there, while the real foe is gaining time and strength to fortify itself and make further inroads.

Our difficulties would be sensibly diminished were we to avoid confounding *post hoc* and *propter hoc* ; coincidences and sequences ; were we to avoid basing rules of practice on the conduct of one case or even a few cases, and the error that practice must always follow the plumb line of theory. We should be on the alert to test the value of new remedies, and should cultivate a spirit, not of blind acceptance of the oracles of the dead past or living present, but of justifiable searching after truth.

We have spoken of fallacies. Fallacy implies truth, once typified by old ocean, which no longer suffices to picture it. It is rather the subtle ether which interpenetrates all things, and is as indivisible and essential as it is ubiquitous.

What is truth ? This has been the question of the ages, and it will ever press upon you. It was asked of Him well-nigh two thousand years ago who alone could rightly tell it. Let us heed the answer. I would say with Tennyson :

“ Let knowledge grow from more to more,
And more of reverence in you dwell.”

This is the key to true living.

THE CHEMICAL IMPORTANCE OF PTOMAINES, OR CADAVERIC ALKALOIDS, IN MEDICO-LEGAL ANALYSIS.

BY WILLIAM B. MCVEY,

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ceutical Society of New Brunswick, Canada.

THE great advancement that has been made in physiological chemistry of late years has materially affected some of the views formerly entertained by our older investigators, and, as the result of the actual experiments of the many workers in that important field of scientific research, has added materially to the work of the toxicologist. It is, at present, a well-known fact that the excretions of all living things contain substances that are poisonous to the organism which secretes it. Thus, for example, a person may be carefully dieted, and allowed to drink only absolutely pure water, eat food of the very best quality, breathe the purest air, and yet in the excreta can and has been found poison. Now, where does this poison originate, and what are its effects on the system, in its various transformations? And is the presence of such poison and its products not easily mistaken, in cases of medico-legal analysis, causing error on the chemist's part, by the use of certain tests to ascertain the presence of the poisonous vegetable alkaloids? Especially as the quantity usually operated on is generally small, by the presence of these ptomaines he might be unconsciously led into error. There is abundant evidence that such has been the case, and possibly some innocent life might have been sacrificed by the finding of poison that was due to natural causes, and which already existed in the body, or originated after death by the processes of putrefaction, which, by the delicate color reaction tests, might have been mistaken for that of administered poison of the vegetable alkaloids. But, fortunately, the chemical analysis was generally regarded, in former years, as a link in the chain of evidence, and, as the art of self-destruction by the organic alkaloids is of a comparatively recent origin, it requires little or no comment, as toxicologists have thoroughly proven themselves equal to the difficulty. In my recent connection, as chemist, on the famous Dr. Meyer poisoning case,

in New York, even that educated villain and his vile associates were ignorant of the use of the alkaloidal poisons. The dreadful vocation of self-destruction, in every other form, was familiar to them, and Chicago Jack, when on the witness stand, surprised all by his cold-blooded testimony that he had suggested to Dr. Meyer that he should use nitro-glycerine to accomplish his purpose, as it was, in his experience, the best drug to use because a chemist can more easily be deceived by it. He stated that the way to work it was to engage a boat, entice the victim to go for a row, give him a drink of whiskey dosed with nitro-glycerine, then set him adrift on a hot day, and, when discovered dead, they would pronounce it a case of death from sunstroke, and that he had practised the use of different poisons on poor tramps in the slums of Chicago, and that the nitro-glycerine was the surest and best. And yet, by turning state evidence, this wretch enjoys his freedom in this free land.

Before entering upon the more practical side of the subject, and differentiate the ptomaines from the vegetable alkaloid poisons, I will refresh your memories a little on physiological chemistry. The microscope has revealed to us the size and shape of the various cells of which our bodies are composed. But in the study of these elements of life, we must not be forgetful of the fact that they have a chemistry as well. The life of the cell is influenced by its surroundings. They grow and perform their allotted work when supplied by the proper pabulum, and become injured when the product of their own activity collects around them.

This poison, therefore, originates in the metabolic changes which split up the organic molecule into its simpler parts, and the final results being urea, ammonia, water, and carbon dioxide. During this process of change that some of the intermediate products are highly poisonous is already well established. The difference in quantity and quality depends on the nature of the proteid acted on, and the force with which the action takes place. The human body resembles a colony of fungi or cells which, when their functions are not interrupted, are normal, so to speak, each cell changing its environments into itself, and the products of its secreta.

Thus our whole body really lives by the joint ferments of its structure, each cell, or group of cells, supplying its special function. Any cause by which the cell or cells are prevented from doing their allotted work produces disease, the study as to the cause of which has of late assumed great importance, as the methods of many of the pathogenic bacteria are due to the production of this form of poison, and as it is found to exist in the dead body has received the name of ptomaines. All putrefaction is now considered due to the action of bacteria, and as a result of the growth of these organisms forms a very complex class of substances which are known as ptomaines, or cadaveric alkaloids. They are produced from

albuminoid substances by the influence of putrefactive decay. Unfortunately, they bear a very marked resemblance in many ways to the class of substances known as the vegetable alkaloids.

There has been separated up to the present time about sixty separate ptomaines, each of which has been so thoroughly studied that their respective chemical formula is already known. Some are intensely poisonous, while others are inert. I will not attempt in this short paper to enter minutely into the special actions and the respective tests allotted to each, by which each can be recognized without doubt, but will present to you the method by which these ptomaines can be isolated, and have arranged these into classes, according to their behavior to solvents; and also mention some of the individual tests whereby, in the same solvent, the identity between ptomaines and vegetable alkaloids can be established.

These ptomaines, or cadaveric alkaloids, as they are sometimes called, possess all the characters of the vegetable alkaloids, are alkaline in reaction, and combine with the acids, and form salts. They are liquid, solid, and crystalline. Some are very poisonous, while others are not. Their behavior towards the general reagents for alkaloids are similar to those used for the vegetable in many respects. Thus it can be easily seen that from their very origin there is great difficulty in the separation of these cadaveric alkaloids or ptomaines, on account of the very complex nature of other substances with which they are associated in great numbers in the decomposing mass. Many methods have been devised, but the one most commendable, which has been used with such success by the celebrated Italian investigator, Professor Selmi, and endorsed by Professor Vaughan and others, is, viz., separation of the ptomaines. The material from which they are to be extracted is divided as finely as possible, and placed in a suitable sized glass flask, to which is added twice its volume of 90 per cent. alcohol, and, if not already acid, acidulate with acid tartaric, and from time to time see that it is acid in reaction as the process goes on. This flask is now connected with a reflux condenser, and placed in a water bath, and kept at a constant temperature of 70° for twenty-four hours. The warm liquid is then transferred to a special devised apparatus for filtering by the aid of atmospheric pressure as follows: The liquid is poured on a damp cloth, placed on a perforated porcelain funnel, which is connected below with a receiver, from which all air has been exhausted by an aspirator, thus securing rapid filtration, and by repeated washing the mass is thoroughly exhausted. This acid alcoholic liquid is now transferred to the following designed apparatus: A tubulated retort, of suitable size, is connected with a tubulated receiver by means of a suitable cork, covered with membrane to exclude air. In the tubule of the retort a small per-

forated cork is placed, through which runs a glass tube extending near the bottom, finely drawn out to a point at the lower end. And the tubule of the receiver is connected with a Leibig bulb, containing dilute sulphuric acid (1 to 10), and the bulbs are connected with an aspirator, by which means a fine current of air is drawn through the liquid, and keeps it constantly agitated. The retort is kept in water bath at a temperature of 28° . The receiver is kept cool by a current of water passing over it. In this way the distillation of alcohol goes on rapidly, and decomposition is so far prevented that volatile bases are never found in the bulbs.

The aqueous extract after the removal of alcohol by the distillation is filtered, and extracted with ether, as long as anything is dissolved. It is then mixed with powdered glass, and evaporated to dryness *in vacuo*. This residue is repeatedly extracted with alcohol, and the alcohol is again distilled by the process above described. The residue is then taken up with distilled water and filtered, then made alkaline with sodium bicarbonate, and repeatedly extracted with ether, benzine, and chloroform. Now, in order to obtain the base extracted by these solvents, if bulky, the greater part may be evaporated on water bath, and the remainder allowed to spontaneously evaporate. By this process a great many ptomaines or cadaveric alkaloids have been separated, studied, and identified.

The following is a tabulated list of these ptomaines which have been arranged according to their behavior to solvents, and the action of some of the individual tests compared with their action on the vegetable alkaloids :

First Class. Includes ptomaines which pass from acid solutions over to ether.

General Tests.

Results.

- | | | |
|-------------------------|---|--|
| (1) Acid tannic | { | The action of these two tests give similar results to those obtained from natural vegetable alkaloids. |
| (2) Iodo-iodide potass. | | |

(3) Chloride of gold = No precipitate.

(4) On evaporating four or five drops of the aqueous solution, the addition of three drops of HCL and one drop of H_2SO_4 gives, on warming, a beautiful *violet color*.

(5) Nitric acid *colors it yellow*. Ptomaines of this class might be mistaken for digitalin, which is also taken up by ether from acid solutions.

Difference.

Ptomaines.

Digitalin.

Evaporate to dryness and treat with H_2SO_4 = A *rose color*, turning *mauve*, with vapor of bromine.

Second Class. Includes ptomaines which pass from *alkaline* solutions over to ether. This class gives various color reactions and form crystalline products.

Physiological Test.

Produces slight dilation of the pupil and diminishes the frequency of respiration.

With the following test might mistake morphia :

Ptomaines.

Morphia.

(1) Iodic acid = Decomposes.

Iodic acid = Decomposes.

(2) Phospho-molybdic acid = At first a *violet*, changing to a *blue* color reaction.

Plat. chloride = A precipitate.

Third Class. Includes ptomaines not soluble in ether, but *soluble in chloroform* as obtained from *alkaline solutions*. All the bases of this class are strongly acid, and possess a pungent, bitter taste. Decompose very readily on evaporation of chloroform, even at a low temperature.

Tests. (1) Iodic acid = Reduces all the bases of this class.

(2) Sulphuric acid = Gives a red color.

(3) Froehde's reagent = Gives a red color reaction.

Fourth Class. Includes ptomaines insoluble in ether and chloroform, and readily pass from *alkaline* solutions over to amylic alcohol.

Tests. (1) Hydriodic acid = Long needle crystals.

(2) Amylic alcohol = A base which *does not reduce iodic acid*, and gives *no color with the usual tests*, thus making a mistake with plant bases impossible.

Warning. *Morphia* = Can also be in this class. The color tests and all tests known for it should be applied.

Fifth Class. Includes ptomaines which are not extracted by either chloroform or amylic alcohol, but which are *soluble in water*, and almost tasteless.

Tests. (1) Sulphuric acid = No color reaction.

(2) Chloride of gold = Gives no precipitate.

(3) Chloride of mercury = " " "

Hydriodic acid = " " "

It is, of course, necessary that the solvents and all materials used in extracting, and the reagents, should be absolutely pure. In separating and isolating the ptomaines from the vegetable alkaloids a good microscope is indispensable, as the crystals formed by the vegetable alkaloids are very marked. When you consider that in some cases not more than two or three drachms of fluid are available for chemical analysis to determine the presence of the different poisons, it will convey some slight idea of the importance and the delicate nature of the work of the toxicologist.

THE PREVENTION OF TUBERCULOSIS.*

BY J. F. MACDONALD, M.D.,

HOPEWELL, NOVA SCOTIA.

OF all the contagious and infectious diseases, none is more universally prevalent than tuberculosis. In none is the medium of contagion so recklessly and persistently sown, and in none is the danger so little known or appreciated. Tuberculous patients walk abroad, scattering broadcast their sputa, laden with the bacillus tuberculosis. (Consumptive people, generally, are not very particular as to where they spit.) Thus the medium of contagion is deposited on our streets, in our churches, public halls, theatres, railway carriages, railway stations, in all public places, all public conveyances; wherever the consumptive goes, whether into public places or private residences, he leaves behind him the seeds of disease and death. Popular belief has been, and still is, that tuberculosis is a disease transmitted from parent to child, from one generation to the next; a disease to be accepted as an inherited doom, the power to escape from which is beyond human control. The medical profession, in the past, to a large extent, has shared in this belief. Hitherto the contagiousness of tuberculosis has either been unknown to the mass of the profession or practically ignored by them. Hence the absence or inadequacy of means taken to prevent and control the propagation of this most deadly disease. It is, probably, owing to the insidiousness of attack and protracted development that the medical profession, as a body, has been so slow in recognizing its contagiousness and the necessity and duty of securing the means for its limitation and prevention.

To-day the contagiousness of tuberculosis is an accepted fact, firmly established by scientific research. Bacteriology, penetrating hitherto unknown regions, has not only demonstrated the origin, but, by actual experiment, the contagiousness of tuberculosis.

Thanks to the revelations of the microscope and the labors of the laboratory for the knowledge now in our possession of this, as of other diseases, and all honor to the men through whose patient, persevering toil the veil of mystery has been drawn aside, and the search-light of science

* Read before the Canada Medical Association, St. John, N.B.

thrown into the regions of darkness and doubt through which we have so long groped !

It is not the purpose of this paper to discuss the contagiousness, pathology, etc., of tuberculosis, but to direct the attention of the profession of this country and this association to the necessity of taking practical and prompt action to secure means for its prevention.

By virtue of their profession, the medical fraternity have constituted themselves the guardians of the public health, and rightly so, for, on account of their professional education, they alone, as a body, possess the qualifications to occupy that position. And upon them devolves, at least, the initiative in this work. Much has already been done, with brilliant results, in the prevention of other contagious diseases ; this one now demands special attention. Examining the Dominion Census Bulletin, No. 15, 1891, we find that of the 67,688 deaths in the Dominion for that year 7,490 are recorded under the head of phthisis, about 11 per cent. of the whole. And doubtless a large percentage of other diseases, as scrofulous, cerebro-spinal, catarrhal, lung, stomach, non-specified diseases, is due to tuberculosis, which will make the percentage much larger. This is alarming, and, if preventive measures are not taken to limit the ever-increasing supply of contagion, the death rate must rapidly increase. Whether it shall increase or decrease is largely in the hands of our profession. For, as widespread as it is, as prolific the ever-increasing supply of contagion, and as firm a hold as it has on our population, no infectious disease may more readily and completely be controlled and prevented. The medium of contagion is found in the discharges of broken-down tissues from the infected. And, of these discharges, the most prolific are the sputa. To destroy this bacillus-laden matter and prevent contagion is our object.

In England, preventive measures adopted—special hospitals for the poor—have resulted in reducing the mortality from this disease fifty per cent. in forty years. In the United States, the profession, and, to some extent, the laity, realizing the great mortality from it, its contagious nature, and the effectiveness of preventive measures, have undertaken the work of inaugurating preventive measures, and are educating the people in that line. In Philadelphia, the Pennsylvania Society for the Prevention of Tuberculosis is doing a great work. What are we in Canada doing? If nothing definite and practical has yet been done by the profession as a body, would it not be well to begin at this meeting of the Canada Medical Association?

In Nova Scotia, the Provincial Board of Health has been publishing, for the information of the people, circulars treating of the nature and prevention of infectious diseases. These are for free distribution, and should be productive of much good. No. 8, "On the Prevention of Tuberculosis

(Consumption)," gives valuable information, and will do much to educate the popular mind in reference to this disease. This is in the right line of work. But we want a better, a more active, interested channel of distribution for the information provided—a volunteer association. It may be that similar work is being done in the other provinces.

Before any comprehensive system of prevention can be successfully carried out, it is necessary to educate the people as to the contagious nature of the disease, how to avoid contracting it, and to teach those having it how to avoid transmitting it to others. This may be done in several ways: by using the "secular press," by the organizing of "societies for the prevention of tuberculosis" in every province, in every city and county in each province; these societies to be composed of all philanthropists, medical or lay (medical men are all philanthropists), and all who are interested in the welfare of their country; all who care to preserve their own lives and the lives of others. These societies should publish and distribute free such literature as will give the people intelligent and full information on the subject.

Then we want legislation. (1) A system of registration of all cases of the disease as soon as it manifests itself. (2) A careful system of disinfection of all infected buildings, private as well as public, and all public conveyances. (3) Government inspection of infected places, all dairies and slaughter-houses; for, unfortunately, our animals, upon which we are dependent for so many of the necessities of life, have become largely infected with tuberculosis, doubtless conveyed, transmitted, to the lower animals by the animal man. (4) Establishment of special hospitals for the reception of infected poor. (5) The enactment of laws to prevent the infected from spreading the infection.

KEEP TUBERCULOUS PATIENTS AT HOME!

Certain places have gotten the reputation of having climate specially adapted to the cure of tuberculosis, and hither the dying consumptives hie, in most cases to die, and in all cases to spread the germs of disease and death. The practice, far too common, of sending tuberculous patients, having reached the second stage of the disease, away from home for the benefit of climatic changes is, I believe, to a large extent useless, too often cruel, and to be strongly deprecated. The migrating from place to place by consumptives seeking relief from the disease is a most effective method of spreading it. The greater the facilities for travel, the more prolific the means of spreading the disease. Hotels, railway carriages, sleeping cars, steamships, etc., become, to a large extent, infected by migrating tuberculous patients. If the public were fully informed as to the contagious nature of consumption, and the danger of infection

from migrating incubators and distributors, the danger from this most prolific source of contagion would be greatly lessened. Hotel-keepers and public carriers, looking to their interests, would be compelled to guard against infection, so far as their houses and conveyances were concerned. Doubtless the infected, when informed, will see the propriety of abstaining from practices that endanger the public welfare.

Localities, as many of the western parts of this continent, so often recommended as the consumptives' haven of refuge, probably owe their immunity from tuberculosis to the paucity of supply of contagion. Pioneers are generally not of the tubercular class of our citizens. If the theory of reinfection, which seems most reasonable, is correct, which I believe, then the newer the locality, the safer for the consumptive. Still better would it be for the new country that tuberculous subjects be prohibited from invading its territory. Is it not true that now, in most of those western ports of hope, tuberculosis is as rampant as in the older Atlantic portions of our continent?

If the profession give this matter due consideration, and the Canada Medical Association take action in the matter and bring it fairly and fully before the people, we will, I believe, get the ready and efficient help of the laity. Show the people the alarming and increasing death rate from this disease, convince them of its contagiousness, and how to avoid that contagion, and we will receive a ready response from at least the most intelligent portion of the people.

Unfortunately, there is no section of our country exempt from this scourge, and few families that have not, either nearly or remotely, suffered from its ravages.

This subject was brought, by the writer, before the Pictou Medical Association at its last two meetings, with the result that the first and most important step, the work of educating the people, has been inaugurated.

ABDOMINAL HYSTEROPEXY.

BY KENNETH N. FENWICK, M.A., M.D.,

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NEXT to pelvic inflammation there is, perhaps, no other disease that we are more commonly called upon to treat than retro-displacements. After labor the ligaments are loose, the uterus heavy and enlarged, and softer than when in a healthy condition, so that, should there be any excessive intra-abdominal pressure, or, as too often happens, the woman may be kept too long on her back after confinement, and perhaps a large pad and too tight abdominal binder applied, the condition of retroversion is confirmed. Then, again, the pressure, acting on the anterior instead of the posterior surface of a softened uterus, may cause the fundus to flex on the cervix, and we have retroflexion.

There almost always follows from this condition symptoms of endometritis and pelvic peritonitis, constant pain in the back, pain while menstruating, and often a too excessive flow, while sterility is pretty certain to exist, or, if pregnancy should occur, there is the almost certainty of abortion.

It is to the treatment of these troublesome cases and their permanent relief that I wish to draw your attention. Most of the text-books, except those of the last year or two, advise that these cases should be treated by massage to loosen the adhesions, if they are present, and, after replacing the uterus, to depend on the artificial support of pessaries.

The trouble in obtaining such an instrument which will properly retain the uterus without causing pain, the tendency to irritation and even ulceration, from pressure or want of cleanliness, while wearing a pessary besides the inconvenience, have called for some way of retaining the uterus in its normal position by operative means.

The two operations which have been found of benefit are shortening of the wound ligaments and abdominal hysteropexy.

The former operation is limited to those cases where the uterus is freely movable, and where there are no adhesions, but the difficulty in finding the round ligament; the chance of mistaking something else for

it ; the danger of tearing the ligament, especially when in advancing age it has undergone fatty degeneration ; and, lastly, the limited experience of most men, render this operation of very infrequent application. Baldy says : " It is a question whether that operation alone could afford much relief. It is usually preceded and followed by measures which ensure its success, and which possibly might have succeeded without the Alexander operation. Again, the operation has a small rate of mortality, and too high a rate of failure. It occupies a position between plastic work which has failed in its purpose and *coeliotomy*." It is limited to those cases where there are " no adhesions, no endometritis, and no tubal or ovarian disease, but the uterus maintains a retroposition, which still gives rise to symptoms. These, and only these, are the cases for Alexander's operation. They must be exceedingly rare, for if a retroposed uterus is put into a healthy condition, the pelvic floor restored, and the organ supported for some months, its ligaments will regain their tone, and require no shortening."

Several attempts have been made to fasten the uterus to the vagina, or, as the operation is called, *colpohysteropexy*, but they are all open to the objection of acting on the fundus and fixing the uterus to tissues that are movable and extensible.

The other operation, then, or abdominal hysteropexy, presents a means of retaining the uterus permanently in a natural position, relieving the painful symptoms due to, and kept up by, the displacement, and often curing the dysmenorrhœa and sterility which so urgently call for relief.

Like many other surgical procedures, this operation was suggested by accident, for so long ago as 1869, in a case of *retroflexion* causing symptoms of intestinal obstruction, Kœberlé opened the abdomen and removed a healthy ovary, suturing the pedicle to the lower part of the wound and thus curing the displacement. Between this and 1880 several cases of a somewhat similar kind were recorded by Schröder, Lawson Tait, and Hennig.

Shortly after this Olshausen recorded an original method, and this has been variously improved upon by Czerny, Klotz, Leopold, and Howard Kelly. The latter has recently published an account of forty-five cases without a single death, and showing remarkably good results.

The operation as now performed is done as follows : The pubis is shaved, and the abdominal wall thoroughly prepared by washing and antiseptics. The Trendelenburg posture is preferable. An incision scarcely more than two inches in length is made through the skin and sheath of the rectus, the muscle being separated by the fingers, the peritoneum is exposed and incised between catch forceps. A stitch is then taken on each side of the wound fastening the peritoneum to the skin,

thus facilitating the next step in the operation and preventing the subsequent invagination of the peritoneum.

The uterus is lifted up, freed from adhesions, if present, and held in an antiflexed position while the ovaries and tubes are examined, and if diseased they are treated according to the condition found. A curved needle armed with silkworm gut is passed under and through the peritoneum and subperitoneal tissue transverse to the incision, about half an inch away from its edge, and close to the symphysis pubis. It is then passed through the posterior surface of the uterus just below the fundus, taking in a layer of tissue about one-half of an inch in width and about one-eighth of an inch in thickness. The suture is then passed through the other side of the incision. Another suture is passed about one-quarter of an inch lower down on the posterior uterine tissue, the uterine surface which is to be approximated to the peritoneal surface is gently scarified, the sutures are tied and cut short.

The abdominal wound is then closed either by continuous catgut sutures taking up each layer separately, or by silkworm gut, through all the layers together. Antiseptic dressings and a binder are applied. There is usually very little bleeding from the uterine sutures, and the operation is hardly any more dangerous than an uncomplicated cœliotomy.

It is not necessary to use a Hodge pessary afterwards, nor to tampon the vagina. Sanger, Routier, and Kelly have all recorded cases where abdominal hysteropexy has been performed that afterwards became pregnant and were safely delivered without damage to the supporting adhesions.

This operation, then, seems to meet the indications for a procedure which will relieve those cases of otherwise incurable retroflexion, and where the intensity of the symptoms demands some means of permanent relief.

Clinical Notes.

CASE OF PRIMARY DIPHThERITIC LARYNGITIS.

By W. B. THISTLE, M.D.,

TORONTO.

FRED. W., æt. 4 years, admitted to Victoria Hospital, suffering from obstruction of breathing. He had been quite well until three days prior to admission. At that time he was hoarse, feverish, and felt ill. The case was looked upon as one of ordinary croup, and so treated. Distress in breathing became greater, and after three days he was brought into the hospital. His dyspnoea was extreme at times, and there was constant distress. He was quite conscious, although drowsy. There was slight recession of soft parts above and below ribs. Throat examined carefully, but nothing resembling membrane was found; urine examined, no albumin. Knee-jerks obtained. The boy was placed in a tent bed and treated as though the laryngitis were diphtheritic. Steam medicated with ol. eucalyptus and turpentine was kept constantly about the patient, except at intervals of three hours, when 3 grains of calomel was sublimed and fumes inhaled for twenty minutes. The bowels were cleared out with a full dose of calomel. No improvement on second day. Breathing was constantly difficult. Was given whiskey and frequent doses of liq. strychnia in addition to steam and calomel fumigation. Examined throat carefully and with a good light, and thought that I could detect a small spot on lower surface of one tonsil, but was not positive. This suspicion, together with the constant character of the dyspnoea and duration of obstruction, favored the idea of a diphtheritic inflammation, and accordingly the boy was sent to the infectious ward. Medicated steam, subliming of calomel, and stimulants were still continued. The breathing was not sufficiently difficult to be much relieved by the introduction of a tube, but the possibility of its becoming so at any moment was apparent. On the third day the condition was about the same, but about midday there was sudden increase in the difficulty. Tracheotomy was quickly done and a

tube inserted, but without giving any relief, and death occurred in a few moments. The intubation instruments were not available just at the time.

A complete autopsy was not permitted here. The larynx and trachea as far down as half an inch past the bifurcation was removed. Grayish-white exudate protruded through the tracheal wound. Upper surface of vocal cords was free of membrane, but membrane welled up between cords. Pharynx, tonsils, and nose were thoroughly examined and no trace of membrane found.

Under surface of vocal cords and interior of larynx and trachea, as far down as the bifurcation, were covered with grayish-white membrane. The deposit was thick and pulpy in larynx, but became gradually thinner as it extended down trachea. It peeled up readily, and formed a complete cast of the larynx and trachea. A portion of membrane was examined microscopically, and Klebs-Leoeffler bacilli found in large numbers.

The interesting points in the case are: (1) The nature of primary membranous inflammation of the larynx; in this case undoubtedly diphtheritic. (2) The difficulty in making the diagnosis. There is apparently nothing to indicate particularly or distinguish the nature of the inflammation, except in cases where there is albumin in the urine, or absence of knee-jerks. But these two conditions can only occur when there has been sufficient toxine absorbed to bring about change in the kidney vascular tufts, on the one hand, or the peripheral nerves, on the other. Until this point is reached there is nothing to distinguish the disease from a simple inflammation of the larynx. The constant character of the obstruction with gradual increase, together with change in the pulse, and drowsiness or stupor, which imperfect supply of air is not sufficient to explain, makes it probable that the inflammation is diphtheritic. (3) The third point of interest is the fact that inhalation of calomel fumes, although thoroughly used, had not the slightest effect. Looking at the condition of the parts, it would, indeed, be wonderful if a diphtheritic culture in this situation could be so easily overcome when a similar growth, perfectly accessible, requires such active treatment to exterminate it.

Progress of Medicine.

SURGERY

IN CHARGE OF

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BIER'S METHOD OF TREATING TUBERCULOSIS.

In 1892, Dr. Bier, a German surgeon, brought before the profession a method of treating tuberculosis of the joints which commended itself on account of its simplicity, and has since been employed with excellent results by the author and a number of others. This method consists in producing a condition of congestion and hyperæmia in the affected part, by the use of elastic constriction, in the following manner: After applying an ordinary bandage to the limb from the distal end to a point just below the lesion, a broad elastic band is applied a few inches above the diseased part with sufficient firmness to induce venous stasis, the skin being protected by a layer of cotton or lint. Mikulicz (*British Medical Journal*, April 21st, 1894) had a favorable experience with this method in a case of marked tubercular arthritis of the knee-joint in which iodoform injections had been previously employed without success. Under its use the tubercular deposits disappeared in eight weeks, leaving a joint which, though painless and free from active lesions, was much impaired, owing to cicatrization of the destroyed structures. In three other cases the results were also excellent, while in a fifth the tuberculous process was arrested, although it was found necessary, subsequently, to amputate, on account of the extensive destruction of the bones by the disease. According to Mikulicz the prospect of curing tuberculosis by this method will depend upon its ability to promote reaction in the diseased part to a sufficient extent that

it will successfully resist the attacks of the tubercle bacillus. Whether its good effects are due to simple hyperæmia, the curative action of the effused serum, or a self-developed tuberculin action, remains to be decided. He advised that the constriction be at first lightly applied, and only for a few hours at a time, and that later it can be increased in force and duration according to the intensity of local reaction and the tolerance of the patient. The bandage should not be left on too long, as atrophy of the limb is apt to result. Dr. Miller (*Edinburgh Medical Journal*) has also observed some improvement from Bier's method in cases of tuberculous joint disease, although its favorable action was still more pronounced in cutaneous affections of the extremities. He prefers intermittent to continuous compression, as the former method is attended with less risk, and is followed by equally good or even better results. In his latest report to the German Surgical Congress of this year, Dr. Bier presented an estimate of his method based upon the results obtained in one hundred and eighty cases of tuberculosis treated by him in this manner. Although these results are in no wise startling, they show that this procedure may be utilized with advantage in certain cases, especially if combined with iodoform injections as recommended by the author. The most favorable effects were noted in cases of tuberculous arthritis uncomplicated by fistulæ, in which rapid and marked functional improvement occurred. This was soon followed by the appearance of a small abscess, which was usually punctured, emptied, and injected with iodoform, without suspending the treatment. Sometimes larger abscesses formed, however, necessitating its discontinuance. In cases with fistulæ, healing seldom took place, and it was usually found necessary to inject the fistulous tracks with iodoform emulsion or Villate's solution. In two of three cases of tuberculosis of the epididymis and testis subjected to venous compression a cure resulted, and, in lupus, a modified method of producing stasis by means of cups proved efficient, and even effected a cure in one instance. At the same meeting, Dr. Zeller, who has tested this treatment at Sonnenburg's clinic at Berlin, also testified to its value. He derived especially favorable results from its use in combination with iodoform injections, and recorded a positive cure in the case of a child suffering from tuberculosis of the knee-joint. In whatever way, therefore, we look at this method—whether as an independent procedure, or simply as an adjunct to the iodoform treatment—it seems certainly worthy of a trial in selected cases. It should be remembered, however, that it is not free from the risk of erysipelas, lymphangitis, suppuration, and atrophy of the limb, and that the patient must be kept under observation during the entire course of treatment.—*International Journal of Surgery.*

FORMALINE AS A PRESERVING AND HARDENING FLUID FOR HISTOLOGICAL PURPOSES.

(G. Bergonzoli, *Bull. Scientifico*, 1894, No. 1, p. 18.) Formaline or formal, in solution concentrated to forty per cent. of formaldehyde, is a limpid liquid, slightly opalescent, neutral or slightly acid, of a characteristic pungent odor. The antiseptic properties of formaldehyde have been studied by Loew (1886), Aronson, Berlioz, and Trillat. The author has found from his observation that solutions of formaline are deodorant and disinfectant; that pieces of tissue immersed in it are rapidly fixed and hardened, and only shrink to an almost imperceptible degree. The color is perfectly preserved, only the coloring matter of the blood being dissolved. For nervous tissue it is excellent. Formaline has the advantage over alcohol that it is not inflammable and is much cheaper.—*Rev. Internat. de Biblog. Méd.*

ACTINOMYCOSIS.

(Max. Wolff, *Berliner Medicin. Gesellschaft et Deutsche Medizinal Zeitung*, No. 19, 1894.) Wolff, with Israel, was the first to obtain pure cultures of the actinomycetes, and also to succeed in producing experimental actinomycosis. He used guinea pigs, rabbits, and sheep, and injected into the peritoneum. He got positive results in the first two kinds of animals, but the lesions were always localized, and never was there generalization as takes place in man. But he killed the animals after four or five weeks. In one case an animal was kept for one and a half years before it died, and in this one there were two metastatic nodules found in the liver, surrounded on all sides by hepatic tissue, thus corresponding to metastasis in man after primary actinomycosis of the alimentary tract. The middle of the nodules was softened, and contained a large number of yellow granules of the size of millet seed. Virchow found that some of the specimens were radiating in form; the rest were simply isolated masses. To the author, the presence of these yellow granules sufficed to establish the diagnosis, but their color might sometimes be brownish or greenish-yellow instead of sulphur-yellow. He showed a specimen of actinomycotic tumor of enormous size taken from the maxilla of a steer. Metastasis has only rarely been observed in animals.—*Rev. Internat. de Biblog. Méd.*

CONTUSIONS AND SPRAINS OF THE BACK, WITH SPECIAL REFERENCE TO THE EARLY TREATMENT OF THESE INJURIES.

During my term of service in the Presbyterian Hospital in 1892 there were admitted to the surgical wards nine patients who suffered from contusions and sprains of the back, and it has occurred to me that a short

description of the method of treatment, which I have employed with the most satisfactory results in this class of injuries, might be of some interest.

In these cases the lumbar-dorsal region of the back was the part most frequently injured, and this part seems to be that which is most commonly the seat of contusions and sprains.

Treatment. As regards the treatment of contusions and sprains of the back, I consider that rest in bed is a matter of the first importance, and, in addition, I have found that the pain and general discomfort of the patient is much diminished, and the time of treatment much shortened, by having the back firmly strapped as soon as the patient comes under observation. The strapping of the back is effected by taking strips of resin-adhesive or rubber-adhesive plaster $2\frac{1}{2}$ inches in width, and long enough to extend half way around the body; these are applied so as to cover in the back one strap slightly overlapping the other, from a point just below the junction of the last lumbar vertebra with the sacrum to the lower ribs.

These straps were often removed at the end of two or three days, and the back was restrapped if the pain and tenderness still persisted. The straps were usually allowed to remain in place until the patient was up and about, without complaining of pain or discomfort in the region of the injury. In cases of severe contusion the straps often require renewal a number of times.

This method of treatment of contusions of the back was first called to my notice by Professor Ashhurst, while serving as resident physician in his wards at the University Hospital, and since I have employed it I have entirely discarded the use of fomentations and stimulating lotions, which are generally recommended in the treatment of these injuries.

The treatment usually recommended in contusions and sprains of the back is warmth, frictions, stimulating liniments, anodynes, acupuncture, galvanism, and massage, and of these I think massage is the most valuable, employed after the acute symptoms following the injury have subsided; but in early stages of these injuries I am convinced that strapping will be found the most satisfactory method of treatment.

I have observed that the application of straps employed as above described is usually promptly followed by relief of pain, and the fixation produced allows the patient to move with more comfort; and I am very certain, after having now employed this method of treatment in a considerable number of cases, that the time required for the recovery of the injured parts is much shortened.—*Henry R. Wharton, M.D., in The Philadelphia Polyclinic.*

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.

The methods of treatment are: (1) By apparatus; (2) by forcible reduction without traction; (3) by operative reduction.

Treatment by the first two methods is regarded by the writer as palliative rather than curative, and as unreliable and generally impracticable.

Other operative methods are briefly considered and said to be unsatisfactory, and the method of Hoffa, of Würzburg, is discussed at length—that by operative reduction of the congenital dislocation.

The operation is thus described by Hoffa: "After opening the joint by means of a Langenbeck incision and subperiosteal separation of all the soft parts from the trochanter major, it is possible, in young patients to the age of seven, to place the head of the femur, by a flexion of the thigh and direct pressure, into the normal acetabulum. Without separation of the soft parts, even after the joint is opened, it is impossible to effect a reduction, but, after the reduction of the head, with the hip and knee flexed, if an attempt is made to straighten the knee, the head of the femur slips out of the acetabulum. It is, therefore, important that the head should be kept fast in the acetabulum while an assistant gradually stretches the biceps, the semimembranoses and the semitendinoses." He also advises the subcutaneous division of the fascia lata and the muscles which pass from the spine of the ilium. The second step is the making of a new acetabulum, which is done by means of a Volkmann's curette. The third step consists in the replacing of the head of the femur into the new acetabulum, which is recognized by the sudden motion of the head of the femur, as in reduction after traumatic luxation.

Hoffa, Lorenz, and other operators find their greatest success in the

treatment of young children, and are unable to effect a reduction in children advanced in adolescence.

From his operative experience and his experiments upon the cadaver, the writer is of the opinion that an anterior division of the strong ilio-femoral capsular bands should be made freely, as by this means older cases could be subjected to operation with better success; that the difficulty found in retaining the head of the femur in the new acetabulum could be overcome by freely cutting the shortened tissues on the anterior surface of the capsule; also that the curette is not necessary in young children, as an acetabulum appears to be present.

The writer's conclusions are: (1) That the method of treatment by traction, or by mechanical means, crutches, splints, recumbent position, with or without tenotomy, do not effect a cure; (2) correction by means of forcible reduction without incision can be applicable in but few cases, and is not reliable; (3) that the method of operative reduction offers the best prospect of a cure. The method, at present, involves risks, and is not certain in its results.—E. H. Bradford, in *Annals of Surgery*, August, 1894.

EXCISION OF KNEE-JOINT. FINAL RESULTS IN THIRTEEN CASES.

At the Massachusetts General Hospital, during ten years previous to 1891, ninety-nine excisions of knee were performed. Thirteen of these cases reported in periods varying from four months to six years afterward, averaging three years after the time of operation. The results may be summarized as follows:

Shortening, $\frac{1}{2}$ to 3 inches.

Average shortening, $1\frac{6}{7}$ inches.

Union complete in twelve.

Movement slight in one.

Limp slight in all cases.

Deformity, not stated.

For internal fixation, metal sutures give the best results.

Transverse incision through ligamentum patella is preferred.

For external support, preference is given to plaster of Paris, extending from the toes, and including the pelvis, holding the foot at right angles.

For at least a year or more, the unprotected leg should not be allowed to bear the weight of the body.

It is better to remove the patella, as it serves no useful purpose.—Charles L. Scudder, in *Boston Medical and Surgical Journal*, August 2nd, 1894.

TREATMENT OF CONGENITAL DISLOCATION OF THE HIP.

Shortening increases with the increase of age. Of cases examined shortening in the second year averages $\frac{5}{8}$ inch ; in the third year, $\frac{5}{8}$ inch ; in the fourth year, $\frac{6}{8}$ inch ; in the fifth year, $\frac{7}{8}$ inch ; in the sixth year, $\frac{9}{8}$ inch ; in the eighth year, $\frac{1\frac{3}{8}}$ inch ; in the twelfth year, $\frac{1\frac{3}{8}}$ inch ; and in the fourteenth year, $\frac{1\frac{5}{8}}$ inch. The limp, also, pretty generally increases with growth. Lordosis is generally a conspicuous deformity, very distressing, and generally giving rise to considerable pain in the lumbar spine.

In children under ten there is a choice of treatment, either by the older palliative or instrumental method, or by Hoffa's operation. After ten Hoffa's method is not to be employed, but Kiomisson's treatment by sub-trochanteric osteotomy. Cases treated by extension and a walking brace have all relapsed when the apparatus was removed. Max Schede, however, claims to have cured four cases by extension and brace, when treatment was commenced under eighteen months, and continued from one to four years.

Several cases of cure are reported by Lannelongue's method—the subperiosteal injection of a 10 per cent. solution of chloride of zinc for the purpose of exciting a bony growth at the site of the injection, the leg being kept continually extended and immobilized for some months, so as to maintain the head in good position.

The writer's concluding observations are :

The number of perfect cures is very small.

The number of cases improved is large.

The results in double dislocations are not so favorable as in single.

The lordosis is generally corrected.

A slight spinal curvature generally persists, owing to the atrophy of limb and pelvis.

The limp persists to some degree always, though, if the posterior dislocation is relieved, a high shoe will correct this limp almost, if not quite, perfectly.

When we consider that these cases will certainly become more and more deformed as they grow older, that one-third of them will have repeated attacks of pain and disability, and that many cases are reported where patients are rendered helpless by the flexion and adduction of their limbs, it seems to me that we ought no longer to send them away without treatment. The mortality of Hoffa's operation is less than it is generally believed to be. The improvement in technique has made it much easier and more rapid, and the results are improving. And, better still, Paci has made it possible, by his rapid method, to treat many cases who could not afford the time and attention demanded by the older methods.

In view, then, of these good results, and the even more promising character of the latest reports, we may undertake the treatment of these cases with the assurance that we can benefit them very materially in a comparatively short time.

THE TREATMENT OF RICKETY BY MEANS OF OSTEOCLASIS.

In the *Brit. Med. Jour* (Aug. 25, 1894) R. W. Murray, F.R.C.S., deals with the treatment of crooked legs occurring in children under five years old who are rickety, or in markedly rickety children a few years older. Treatment by at once fracturing the curved bones and subsequently putting them in splints or plaster of Paris is strongly urged. The author has applied this treatment on 311 legs during 1893. His treatment of the knock-knee cases is the same as in the case of curved tibiæ. A green-stick fracture is produced, and correct position secured. In no case have instruments been used to produce fracture except the operator's hands. The objection urged to the application of fracture to knock-knee cases—that there was danger of producing separation at the epiphysis, and, consequently, interference with the growth of the limb—is not well taken, for the author has made it a practice to examine carefully an exact point of fracture, and finds that it almost invariably occurs quite one inch above the epiphysial line. In several cases the knock-knee was corrected on one side only, and eighteen months after no difference in growth was found. The disadvantages connected with the gradual straightening by splints and rest in bed are many. The time required, difficulty in adaptation of splints if child is at home, difficulty in keeping the child off his feet, and in addition there is the uncertainty of the result. The operation is absolutely free from risk, no mishaps occurring in the long list treated in this way. If fracture cannot be produced by simply using the hands, the author advises cutting the bone with a chisel instead of using extreme force by other means.

CONGENITAL TUBERCULOSIS.

In Berlin *Klin. Woch.* (July 9th, 1894) a case is related by Lehmann. A phthisical mother gave birth to a child, and died three days after from tubercular meningitis. The child lived twenty-four hours. In its liver, spleen, and lungs nodules exactly resembling tubercles were found. Tubercle bacilli were present in large numbers. The disease was more advanced in the bronchial and mesenteric glands. The placenta was, unfortunately, not examined. Whether the general tuberculosis was a new infection from the mother or from the older lesions in the glands could not be determined. The rupture of a tuberculous focus into the placenta into the foetal circulation is possible.

IMPERFORATE ANUS. OPERATION NINE MONTHS FROM BIRTH.
RECOVERY.

Henry Strachan, of Kingston, Jamaica, reports the following interesting case, which was under his care in the Kingston Hospital (*British Medical Journal*, August 18th, 1894):

J.B., æt. 9 months, had never passed a stool, but the mother had noticed that fluid fæcal material in small quantity passed away from the "front passage." There was never any "back passage." The infant had only begun to suffer during the past two or three weeks.

It was found that there was an imperforate anus; deep pressure did not define the rectum, but a fistulous canal, just large enough to admit the passage of a small director, led from the fourchette, upwards and backwards, to what was evidently the blind end of the rectum. The abdomen was distended, and evidently tender, but the general condition was not grave. I decided to operate from the anal site.

Operation. An incision was made in the pigmented spot of skin which occupied the usual position of an anus, and a careful dissection reached the end of the rectum, which was about an inch from the skin surface, without opening the peritoneal cavity. The gut was incised with scissors, and the wall of the rectum brought down and stitched to the skin. An enormous evacuation of solid and semi-solid fæces followed. The child made a rapid and perfect recovery.

Remarks. The case is interesting as showing how long an infant could exist, passing only a little fluid fæces daily, through a fistulous passage about the size of a crow quill. It was only when the accumulation of gradually solidifying fæcal matter began to extend the abdomen that any symptoms of obstruction manifested themselves, and this not until the child was nine months old. The rapid and complete recovery is satisfactory, for the mortality following this operation is usually high. Perhaps the greater age and development of the child at the time of operation placed it in a better situation for recovery than obtains in infants operated on when only a few hours or days old.

Editorials.

THE ANNOUNCEMENT.

THE announcement of the College of Physicians and Surgeons has at last come to hand. It is simply a reprint of the matter that has already appeared in the *Ontario Medical Journal*. It is undoubtedly a disgraceful piece of work—an imposition on the profession; the presswork, composition, paper, and binding are of the cheapest possible kind. The cover is on paper of the poorest quality, while the body of the book is on that commonly known as “tea paper.” The cost of the announcement this year, allowing 2,300 copies to be printed, could not exceed \$250, while the book as sent out, in two columns, with the same matter that had already been used in the *Journal*, could not exceed \$135. These are fair and accurate figures, and we would be willing to duplicate the job at these figures. But no, we would not turn out such a job with the imprint of our office. This plan of using the matter from the pages of the *Ontario Medical Journal* was attempted last year, but the President, in the presence of the writer, simply said that he would not allow it. How does it come that such a disgraceful thing is allowed this year?

THE PATRONS AND THE MEDICAL PROFESSION.

WE regret exceedingly that the Patrons of Ontario, in framing their platform, should have seen fit to attack the existing status of things medical. At a meeting recently held in Toronto they attacked certain clauses of the Medical Act, but especially one which gives the Ontario Medical Council power to suppress quacks and quackery. There can be scarcely any doubt that farmers suffer more than any other class in the community from dishonest and fraudulent medical fakirs. It seems marvellous, therefore, that they should lend themselves to certain unscrupulous physicians who desire free trade in medicine in order that they may have free license to bleed to the utmost an unsuspecting and gullible public.

We have no desire to quarrel with the Patrons of Industry ; as a matter of fact, we entertain a high respect for them. They have among their members a large proportion of honest and intelligent men ; they are undoubtedly desirous of introducing reforms which they honestly think would be in the interests of this country ; they are thoroughly in earnest, and well organized. If they will carefully study the attitude of the medical profession, we think they will find that a majority of reputable medical practitioners cordially sympathize with their aims and aspirations. Why is it that they seem inclined to ignore the great mass of respectable physicians, and work in the interests of unscrupulous quacks and charlatans—the worst sort of blackguards that can prey on any mixed community ?

We trust the leaders of the Patrons will study this subject very carefully. We have a system of licensing physicians which has no superior in any part of the world. It is considered by conservative Great Britain as probably the best in the world, but cannot be copied there on account of the opposition of certain universities and corporations which will not agree to give up their rights. A high standard of education in medicine furnishes the best possible guarantee of honesty and respectability on the part of physicians, and safety for all who are placed under their care. We believe the Patrons have no desire to make a decidedly retrograde movement. They have listened to arguments which have been used for ages in the interests of fraud and humbug, without apparently studying the subject in all its aspects, and without considering the consequences which might follow if certain proposed amendments were adopted. If the Patrons are determined to interfere in medical matters, we hope they will freely consult physicians of high standing and unquestioned honesty—and not needy adventurers who have become professional pariahs on account of disgraceful and dishonorable conduct.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

THE recent meeting of this association, held in Toronto, September 19, 20, and 21, was the best purely medical meeting that ever was held in Canada. There may have been better in other parts of the continent, but we have no knowledge of such. The provisional programme, which we published in our August issue, gave rich promise of something beyond the ordinary, and created unusually high expectations among those acquainted with the history and the personnel of the society in the past. The highest of such expectations, and perhaps more, were fully realized, as was generally acknowledged by those present.

We understand the attendance of the Fellows of the association was larger than at any previous meeting. An inspection of the programme gives evidence of a somewhat broad geographical area which furnished the visiting members for this meeting, including New York, New Jersey, Massachusetts, Pennsylvania, Ohio, Michigan, Illinois, Indiana, Kansas, Maryland, District of Columbia, Missouri, Kentucky, Alabama, and Ontario. It was expected that California would send a representative in the person of Dr. Clinton Cushing, of San Francisco, but, unfortunately, this gentleman was unable to complete his arrangements for the journey.

The Fellows evidently came to work, and not to play. The various sessions were opened *on time*—not an hour or even a few minutes late—and were closed generally *after time*—the next day on one occasion. The session on Wednesday evening continued from eight o'clock until after midnight, without a minute of intermission. The papers were of a high order, and the discussions, as a rule, were keen, vigorous, and interesting. Many members of the profession in Toronto, and various parts of Ontario, accepted the general invitation extended by the association, and took a deep interest in the proceedings of the meeting. There seemed to be a general consensus of opinion among such visitors that they were attending a great meeting. As these visiting physicians had no opportunity of giving expression to their feelings in this direction, it may not be out of place for us to say that they, one and all, freely expressed themselves, in private, as being extremely grateful to the association for holding the meeting in Canada, and, at the same time, extending to them such a cordial invitation to be present.

We have much pleasure in giving in this issue a somewhat extended, although far from complete, report of the proceedings. The officers of the association did their work well—or more than well. The president, Dr. George Rohé, of Catonsville, Md., showed himself to be a model chairman; the vice-president, Dr. G. F. Hurlburt, of St. Louis, Mo., was an efficient assistant; the secretary, Dr. William Warren Potter, of Buffalo, excelled himself, if such be possible, in the performance of his very arduous duties, and allowed nothing in the shape of a hitch to occur from beginning to end. In fact, the officers, the members of the council, and the ordinary members worked together with an evident intention of making the meeting a grand success—and they succeeded.

THE LOCAL ARRANGEMENTS FOR THE MEETING.

The preliminary arrangements and the details as to place and management of the meeting were left in the hands of the local committee of arrangements. The officers of the Ontario Medical Council very kindly placed their hall and committee rooms at the disposal of the association.

The council building, being centrally situated, and well arranged, made an admirable place of meeting for a society limited in numbers as this is.

The officers of the association showed such a desire to make the most of the time allotted for the various sessions that the physicians of Toronto were prevented, to some extent, from paying as much attention to the visitors as they desired. The Fellows present, however, expressed themselves as more than satisfied with the treatment they received. The session of the first afternoon was closed one hour earlier than usual to allow the Fellows and friends of the association to accept the hospitality of Dr. Jas. F. W. Ross, of Toronto, who entertained the party on the steam yacht, *Cleopatra*, which went out for a short cruise on the lake. A most enjoyable time was spent, and the association more than made up for the time lost by a very long and exceedingly interesting evening session.

The preparation for the annual dinner, which was held in the handsome building of the Athletic Club, was left entirely in the hands of the local committee, the members of which feel very much indebted to the officers of the club and numerous members of the profession of Toronto for kind support and substantial assistance in many ways. The dinner was a success in every respect, and is likely to be long remembered by those who were present. The guests of the evening, the Lieutenant-Governor of Ontario and Professor Goldwin Smith, were especially happy and felicitous in their after-dinner speeches. Our friends from the neighboring republic did most of the talking—and they did it well. Their speeches were bright, racy, and witty, with just enough of the solid to balance things happily. Although speeches from Canadian doctors were few, we had one from our dear old friend, Dr. Harrison, of Selkirk, which was worth a great deal. It contained a combination of comedy and tragedy which was peculiarly effective. The doctor related many anecdotes in connection with his country practice which were irresistibly funny; but when he turned to the dark side of the picture, his truly pathetic narrative of the troubles and afflictions of one of his farmer patients, who had at one time on his hands a sick wife and a dilapidated threshing machine, literally brought tears to the eyes of many present—from immoderate and uncontrollable laughter.

MEMBERS BY INVITATION.

We have already referred to the interest evinced by a large number of visiting members of the profession from various parts of the province, including Toronto. We are glad to be able to say, at the same time, that the Council and Fellows of the association were much pleased with the attendance of so many visitors, and the great interest which they manifested in the proceedings. One of the most prominent Fellows thus

expressed himself in a letter since he returned to Philadelphia : "I was greatly pleased with your physicians, and they paid the society a great compliment by attending the meeting in large numbers." Similar opinions were freely expressed by many of the Fellows during the meeting. It has been found that an interested and sympathetic audience furnishes the healthiest sort of stimulus for free and vigorous discussion at meetings such as this.

It may be well to inform the president and council that, if they intend to hold another meeting of the association in Toronto in the near future, it may be necessary to restrict the number of invitations, or provide a larger hall.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR DOCTOR,—I once more take advantage of your invitation to write you and thus renew my relations with the medical profession of the province.

I have now spent more than a year in this land, and while I have done a good deal of hard work I have enjoyed it very much. The language is difficult, and we must spend as much time with our teacher as possible, besides talking with the people and listening to them in order to get our ears and tongues trained to the odd sounds and articulations. It is sometimes difficult to make a diagnosis when you are unable to understand the answers given to your questions.

I presume you have noticed in the newspapers references to the present disturbed state of Korea, and if you have thought of the matter at all you will have concluded that we are in a dangerous place. However, it is not so bad as it appears to our friends at a distance, and we are still all alive and well.

In my previous letter I spoke of the Government Hospital, and my hope that it would, in time, develop into something I could be proud of. You will perhaps be surprised to hear that after six months' trial I gave it up as a bad job, as I found that it was being run by the government only as a means of putting money into their own pockets, and that there was no hope of getting them to supply either drugs or food, or even to put the rooms in repair. I was very sorry it was so, because the place was large and centrally located on the side of a hill, and patients were sufficiently numerous to satisfy the desires of any man for work. When I began I treated less than ten patients per day, but before I left I saw as many as fifty-three out-patients in one afternoon, besides dispensing all their medicines, attending to in-patients, and visiting others at their homes. Many of the cases required operation, and every afternoon I performed several.

Fistula in ano is very common, and I have cut as many as four in one day one after the other, and have more come the next day and the next. Some of these were of long standing, and had several openings situated from half to one and a half inches from the anus. If they were very deep

or the patient was very sensitive, I injected cocaine, but oftener the cutting was done without an anæsthetic. After laying the sinuses well open, I cleansed them thoroughly, packed them with a mixture of iodoform and boric acid, put on a pad of absorbent cotton, gave the patient one grain of opium for each night and morning for three days, and then sent him home, with directions to come every day for a little while to have it dressed. They nearly always walked home and back, but in spite of this lack of rest the cases did surprisingly well, all healing nicely in a very short time. I have not been able yet to determine why this disease is so prevalent here. Some say it is because the Koreans sit on warm stone floors a good deal, and thus tend to produce congestion of those parts. Sometimes I have thought the sinuses resulted from syphilitic abscesses. A longer period of observation may throw light upon the cause.

Another common disease is suppuration of the glands of the neck and axilla. They came to the hospital at the rate of half a dozen a day, and such exaggerated cases I never saw in Canada. There was evidently only one thing to be done for most of them—to evacuate the cheesy pus, scrape out the cavities thoroughly, remove all the affected glands possible, and dress with iodoform and boric acid, at the same time giving fair doses of iodide of iron or cod liver oil. These cases, too, although tedious, did well enough to repay the surgeon for all his trouble. I was surprised at the equanimity with which most of the patients bore this cutting and scraping. At first I administered chloroform, but this required so much time, not having a helper, that I had to give it up and do the best I could without an anæsthetic. It was not pleasant to me to make such extensive cuts under such circumstances, but I gradually got used to it. In one case I opened an abscess by a cut extending from the middle of the neck in front, upwards, outwards, and backwards to the mastoid process. The patient squirmed, used the usual Korean exclamation, and then thanked me.

One day a man came to the hospital from the far north, about two hundred and fifty miles from here. When a boy he had had smallpox, accompanied by ulceration of the nostrils, the openings into which had thus been completely obliterated, so that he could only breathe with his mouth open. I injected cocaine, cut through the adhesion, and, having nothing better, cut two pieces of bamboo and inserted them into the nostrils to keep them open and still allow him to breathe. He was greatly relieved, they healed nicely, and he went home and sent down a friend of his who was similarly afflicted.

Another young man was brought in whose mouth had been so ulcerated when he had smallpox that his cheeks had become adherent to his jaws on both sides above and below, so that he could neither, of his

own will nor by force, open his mouth so as to allow more than one-eighth of an inch of space between his upper and lower teeth in front. He had always lived on liquid food. I injected cocaine, cut the adhesions, and set him free, but it was a very difficult piece of work, and I am sorry to say I lost sight of him before healing had taken place, and I fear adhesions may again form.

I had one case which I diagnosed as sarcoma of the antrum, but it had already caused such extensive destruction of the bones that operation offered no hope of relief, so I declined the case.

One man came with epithelioma of the scalp. I declined to operate, as he was already suffering from marked constitutional symptoms, and I received word a few months later of his death. I had not previously seen epithelioma in this location. Is it not rather uncommon? I have had two cases of noma within the year, both far advanced and beyond hope of relief. It is a moderately common disease here.

As I hinted before, eye diseases are amongst the most numerous, and some of them are very interesting. One elderly man came from the north country with his eye protruding about two inches, the ball, of course, uncovered, inflamed, and suppurating. I enucleated the remains of the ball, and found a solid elastic tumor attached to and apparently springing from the optic nerve. This I removed, and the case did well. Soon afterwards a man came from the southernmost province of the country with one eye projecting very much, and at the same time turned outward, so that he appeared to look at his ear. I made an incision through the upper lid, and removed a fatty tumor three inches long and one inch thick, shaped like a sausage. It had apparently grown from the eyelid, as it was attached to it, and had gradually forced its way past the eyeball, displacing it forwards and outwards. The optic nerve and vessels had gradually elongated, and sight had remained good. When he left the hospital the eyeball had only partially returned to its place, and vision was only partial, but was improving.

A very common disease here is relapsing fever. Of course I had not seen any cases at home in Canada, and so when I saw it here I was at first puzzled as to what name I should give it. The natives know it and dread it, and the victims are generally turned out of doors to do as best they can. If we walk outside the city walls we can generally see many such sick people lying in the shelter of the wall, waiting for death or recovery, while others may be found lying under straw huts. Money was intrusted by home friends to Rev. Dr. Underwood to erect a hospital for the reception of such patients, and last spring he bought a beautiful site on a hillside outside the city and asked me to take charge of the work. We have now a comfortable Korean building there, and from the first have had all the

patients we had room for. During two months we received and treated forty-five cases, with only one death.

The symptoms answer exactly to the description of relapsing fever as given in the text-books, except that no mention is made of epistaxis, which occurs in the patients here in nearly every case just before the crisis.

I have not yet examined the blood for spirilla, my microscope not having been in shape, but I intend to do so very soon, and, of course, that will settle the identity of the disease if I find them.

Some of the cases do not relapse, but many do, some once, some twice, and I have been told they occasionally do so several times, though I have not yet seen such. It is a very painful disease, the patient suffering much the same as with la grippe, but even under antipyretics there is seldom any mitigation of the symptoms until the sixth day, when the crisis commonly occurs, and immediate relief follows a profuse perspiration. If relapses occur, recovery of strength is apt to be slow, and several times I have observed pneumonia and nephritis as sequelæ.

My usual treatment has been (*a*) a good cathartic, (*b*) phenacetin in 10 gr. doses to relieve pain, and (*c*) a mixture of quinine and nitro-muriatic acid, as in typhoid fever; accompanied by as much easily digested nourishment as the patient can take. One of the physicians here administered a cold bath, followed by sweating by means of a hot room, and pilocarpine, thus endeavoring to anticipate the crisis. Relief of symptoms appeared to follow, and I tried it at "The Shelter," as our place is called, but while relief followed for a few hours the symptoms all returned, and the crisis came at the usual time.

There is another fever here which the Koreans call by the same name as above, but of which they are still more afraid. I have not had any cases of it yet, but they say the patients are covered with small red spots, and they very often die. I presume it is typhus fever from the description given. I think the one case which I said above died in our hospital was of that type, though I am not sure, as I was away when she was admitted, and for some days afterwards.

About the first of May I received a request to go see a sick man about sixty miles from here. The messenger had been between two and three days reaching me, as he came on foot. I started next day on horseback, accompanied by Rev. Dr. Underwood, and we were nearly three days making the journey, as the road was bad and we were delayed by a heavy rain storm. On arriving at the place we found the man had already died. This was of course a disappointment, but it is an incident of life in such a country as this. We remained in the town from Friday morning till Monday morning and treated many patients, our little 8x8 foot room being

surgery and dispensary combined. It was the first visit of a foreign physician to that neighborhood, and we were objects of great curiosity. There and *en route* I treated about eighty patients, and while I was engaged in this work Dr. Underwood talked with the assembled crowds, telling them of Christ.

On our way back we were greeted by those whom I had treated, and I found, to my satisfaction and theirs, that all had improved in the meantime. One laughable incident occurred. I had operated on a man for fistula in ano, to the delight of the assembled onlookers, to whom surgery was a new thing, and on my return I was told the patient was just about to die, being in great suffering and unable to eat. I was led to his room, which, of course, was stuffy as it could be and full of sympathizers, and after examining the wound, feeling his pulse, looking at his tongue, and doing all the other things necessary to satisfy their minds, I told him he was doing well, and that he would not die. At this his long face shortened, and a few minutes afterwards, as I was on the street mounting my pony, I noticed my friend amongst the crowd, laughing and seeming quite happy. On enquiry, he said he was much better and had no pain. So, you see, it is not only in highly civilized Canada that mental impressions make people sick, and the assurance of the doctor that all is well serves to remove alarming symptoms.

About the first of June I received a telegram from Fusan, asking me to visit Dr. Irvin, who was very ill. Now, Fusan is a port on the southeast coast of Korea, and can be reached in eight to ten days overland, or in two days by steamer, round the coast. To my delight, I found a special freight steamer was to leave Chemulpo the next night, and would call at Fusan. I say to my delight, because an eight days' forced ride either on horseback or in a sedan chair, over the mountains of Korea, would have been no joke, the more especially as the road leads through the province where a rebellion was then going on, and, besides, my patient might have died in the meantime. Well, that night, having got the symptoms, I telegraphed directions for treatment, and next morning set out on horseback for the port of Chemulpo, twenty-seven miles distant. I reached there at 5 p.m., and found that the boat would not start till next day at 11 a.m. That meant twelve hours' delay. At 11 a.m. we weighed anchor and were gliding along nicely, when all at once the boat came to a standstill, and we found we had run on to a hidden mud bank, so common in this harbor. The boat was heavily laden with rice, and could not be moved either forwards or backwards; and, to add to our dismay, we noticed that the tide was going out, and we should certainly have to wait a whole day at least. The rest of that day was spent in unloading the rice on to lighters, about one hundred coolies being used in the work. We then lay and waited for

the incoming tide to raise our lightened boat off the mud, which it did about 2 a.m., and we sailed out of the harbor and cast anchor in deep water. Next day the rice was reloaded, and about 2 p.m. we made another start. We then had a fine sail down the coast amongst the innumerable islands, but on the last morning the fogs were so dense that we had to anchor three times, lest we should unintentionally strike on one. At last Fusan harbor opened before us, and on Friday morning I reached my patient, having been summoned on the previous Sunday. I found him suffering from relapsing fever, and just past the crisis. He is only the third foreigner I have known to have contracted that disease here. He continued to improve till the fourteenth day from the commencement, when he relapsed. I remained with him for nine days, and then started for home, where I arrived safe in due time, after an absence of fifteen days, during which I had been unable to send any message to my home, as the telegraph lines were down, and no boat had been running. Such is life in Korea.

But now, as usual, I am spinning my yarn too long, and I haven't yet said anything about the war.

A rebellion broke out in one of the southern provinces last spring, and the government, being unable to suppress it, asked the Chinese to help them. They sent over about 2,000 soldiers, who, however, accomplished nothing. A treaty made some years ago between Japan and China forbade the landing of troops here by either of those nations. So the Japanese, having already some causes of quarrel with Korea and China, took advantage of this violation of treaty, and in the middle of June began sending in forces; at first only a few, but every few days more and more came, until there were several thousand here, and they gradually took up points of vantage until they occupied every place where a force might be necessary in case they met with opposition.

The Koreans are utterly unprepared to fight with any other nation, and so no opposition came from them, except protests. The Japs demanded the complete separation of Korea from China, asking the Korean king to proclaim Korea's entire independence, and China to acknowledge it. China refused to do so, and the poor Korean king was in a tight place. His country already occupied by a strong force of Japanese demanding a certain thing, there seemed no way out of the dilemma but to accede to the demand. On the other hand, if he should make the proclamation, doubtless China would severely punish him. Which should he fear most? Which would most likely win—little Japan, with a well-disciplined army and a small but excellent navy, or great China, with its 300 millions of people, and its somewhat poorly-trained army and navy? About five weeks passed, during which the Korean government parleyed with the Japs, but gave no

answer, while the Japs fortified all the approaches to the capital, and a small force of some 1,500 Chinese landed and joined the 2,000 already here.

Saturday evening, July 21st, the Japanese consul gave an open-air concert by the army brass band, to which he kindly invited our community. This was, of course, an unusual event here, being the first opportunity there has ever been here to listen to such an orchestra ; so many attended. It was noticed that a great many Korean officials were present, and those of our number who were there were struck by the friendliness that seemed to exist between them and the Japanese consul. I mention all this only to emphasize the fact that the following Monday morning at 5.30 we heard a rattling fire of musketry, and soon discovered that it was in the neighborhood of the palace. The war had at last begun, and the Japs were going to get possession of the king and capital at the first stroke. As soon as I could, I got to the top of a hill which separates our house from the palace, but in time to see only the last of the firing. In half an hour from the first shot the palace was captured and the king taken prisoner, while at the same time all the city gates were seized, and the Japs were masters of the situation. In the afternoon another battle was fought within the city, by which the Japanese were able to occupy the Korean barracks, and they then disarmed all the Korean soldiers.

It has been impossible to learn how many were killed and wounded. I have seen quite a number of the Korean wounded, but the Japanese have a competent ambulance corps and staff of surgeons, so that they care for their own wounded, and others as well. I will describe a few of the cases and the results. You will probably smile as you notice that nearly all were shot in the back, evidently in the act of running away ; but, poor things, they are not to be blamed, for they have inferior arms, and are almost devoid of training.

CASE 1. Shot in the back close to spine. No trace could be found of bullet, but he complained of abdominal pain, and there was a little tympanitis and a temperature of 100° to 101° F. He was given opium and kept quiet for a few days, when he had a movement of the bowels and passed the bullet, which was turned inside out and very ragged. He gradually improved, but is still in the hospital, and complains somewhat of pains in the abdomen. His pulse is good, but his temperature occasionally goes up to 100° F. and then down again. He eats fairly well, but says it gives him pain. At one time we discussed the advisability of opening the abdomen, but he improved so it was not done.

CASE 2. The ball entered the back of the neck just behind the edge of the sterno-mastoid muscle, and, passing forward and upward, tore its way through the lower jaw, breaking it into small fragments. Continuing its

upward course, it split the tongue horizontally, passed through the middle part of the upper alveolus, breaking it into fragments, and then escaped through the lips, tearing them very much. I sutured the main parts of the lower jaw with wire, cleansed the wound as thoroughly as possible, sutured the external tears, and bound up the shattered jaw as well as I could. He was unable to swallow, so he has been fed most of the time per rectum. Considerable fever followed after a few days, so the wound was syringed out from behind and he improved again, but during the last two or three days he has become feverish. Ultimate result is as yet uncertain.

CASE 3. Ball entered at the back of elbow, shattered the ends of the ulna and radius, and passing out in front tore the flesh about $1\frac{1}{2}$ inches each way, in four directions. It was at first decided to amputate at once, but we decided to cleanse it and dress it, as the blood and nerve supply seemed to be sufficiently good to make it worth while to try to save the arm. I am sorry to say this estimate of the blood supply was incorrect; the hand next day was cold and circulation very feeble, and, although we tried hard to keep it going, it had entirely ceased on the second day, and we amputated above the elbow. It has done well, and he is nearly better now.

CASE 4. Was shot through the scapula, and, passing through the left lung, the ball remained just beneath the skin in front of the chest, where it could be felt by the finger. I had no hand in the case, but have seen it frequently. The ball was left in situ for several days, and then removed by cutting through the skin. The lung wound has healed well, but necrosis of the scapula, I am told, has set in. The patient was not seriously inconvenienced by the wound in the lung.

I might go on enumerating a good many of these, but I fear you would weary of them, so I must close.

Before doing so I will mention one case I had. A man, while in a drunken frenzy, cut his throat with a large knife. The wound, which was three inches long, partially severed the trachea. When he reached the hospital air could be heard whistling through the opening, and all the cellular tissue of the body crepitated under the hand, being filled with air. He was very fat, and noticing that when I tightly closed the wound no air escaped I sutured in that position, and it healed by first intention, no further trouble with the trachea being experienced.

The war still continues. We are yet safe and comfortable, receiving most courteous treatment at the hands of the Japanese, who practically hold the country at present. They have utterly defeated the Chinese force that was here, the result, as far as we can learn, being seventy Japs killed and 750 Chinese killed, besides wounded and prisoners. They have sunk and captured several Chinese gunboats and one transport that was carrying 1,500 Chinese soldiers.

The constitution of the country is now being revised, many grave abuses being reformed; but, of course, how it will all turn out, or when it will end, we know not. We understand that the Japanese have taken a strong force to Tientsin, with the idea of following the English precedent of storming the Chinese capital of Peking.

I must apologize for such a long letter, but, you see, when one gets to narrating his cases and describing things of such interest to us as the present war, he forgets that to others they may not be so full of interest. Please publish as much of this as you may feel inclined to do.

The weather has been hot, but is now moderating, the nights being quite cool.

Seoul, Korea, August 9, 1894.

O. R. AVISON.

August 20th. Many thousands of Chinese soldiers have entered Korea from the north, and are now within 150 miles of Seoul. A strong Japanese force is now on its way to meet them, and we expect several battles will be fought within a few days. On the result will depend whether the Chinese can come to Seoul or not.

O.R.A.

ACKNOWLEDGMENT OF THANKS.

To the Medical Electors of No. 1 Division :

GENTLEMEN,—Allow me to take this method of returning you my most sincere and heartfelt thanks for the confidence reposed in me and for the generous support you have accorded me during the past fifteen years as your representative in the Medical Council of Ontario, and for again electing me to that honorable position for the fourth time, by acclamation, and that, too, in the face of strenuous opposition and fierce attacks made on me and against the retiring council by Drs. Sangster, Armour, Lammiman, Hillier, and other members of the Defence Association, not only through some of the medical journals, but in the secular press, more particularly the *Mail* and *Farmers' Sun*, both of which have sought to destroy the council and defeat all its old members. You have shown by re-electing me that your sympathies are not with these agitators, who would, by their writings and through the influence they wield over such papers as the *Mail* and *Farmers' Sun*, and with their assistance, reduce the profession to the position it was in before the Medical Council was established, and leave the public a prey for the illiterate and hungry fakirs and quacks that swarmed this fair province prior to that time, and would again do so if it were not for the wholesome check which the present council has over such characters. While some acts of the past council may not have met with your entire approval, yet their course, as a whole, has done so, and I can assure you it has been my aim, as well as that of my col-

leagues, to raise the standard of preliminary and medical education, to stamp out quackery and uphold the honor and dignity of the profession and elevate its standard, and by so doing confer a lasting benefit on the general public. Therefore, I would earnestly urge those in other constituencies who have the opportunity to support any of the old members, as well as others, opposed to supporters of the Defence Association who may be seeking election to do so, as I feel confident the interests of the profession will be safer in their hands than in those who are opposing them. Again thanking you for past and present favors, and assuring you that my course in the past shall be a guarantee of my conduct in the future, believe me to be,

Yours gratefully,

JOHN L. BRAY, M.D.

TESTIMONIAL TO SIR JOSEPH LISTER FROM FORMER COLLEAGUES, PUPILS, AND WELL-WISHERS.

To the Editor of THE CANADIAN PRACTITIONER:

DEAR SIR,—Sir Joseph Lister having recently retired from active hospital and teaching work, the occasion has been thought appropriate for presenting him with a testimonial of the esteem in which he is held by his former colleagues and pupils, and committees have, therefore, been formed in Glasgow, Edinburgh, and London, for the purpose of raising the necessary funds.

It is proposed that the testimonial shall take the form of a portrait. Subscriptions have been limited to two guineas, and it is hoped that sufficient funds will be collected to permit of some memento of the occasion being presented to each subscriber of that amount.

As there are probably many surgeons in Canada who may wish to join in the movement, but whose names and exact addresses it has been difficult to ascertain, I should be glad if you would permit me to state that subscriptions may be sent to me at 29 Weymouth Street, Portland Place, W. London, England, or to one or other of the following gentlemen, who have kindly consented to act as treasurers, viz.: Dr. James Finlayson, 4 Woodside Place, Glasgow; Professor Chiene, 26 Charlotte Square, Edinburgh; Professor William Rose, 17 Harley Street, London, W., England; Dr. Malloch, 124 James Street South, Hamilton, Ont.; or Mr. J. Stewart, M.B., Pictou, Nova Scotia.

I have the honor to remain, sir,

Yours faithfully,

J. FREDERICK W. SILK,

Honorary Secretary.

P.S.—Two guineas are about \$10.23.

Meetings of Medical Societies.

SEVENTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNÆCOLOGISTS.

Held in the Council Chamber, College of Physicians and Surgeons, Toronto.

THE American Association of Obstetricians and Gynæcologists held their annual meeting in the building of the College of Physicians and Surgeons, Toronto, on September 19th, 20th, and 21st. There was a large attendance present, both of members and visitors. The chair was occupied at the opening of the session by Vice-President Dr. George F. Hurlburt, of St. Louis, Mo.; Dr. W. W. Potter, of Buffalo, secretary.

Dr. James Thorburn, on behalf of the profession in the city, welcomed the members of the association to Toronto.

The first paper was read by Dr. J. H. Carstens, of Detroit.

THE INCISION IN ABDOMINAL SURGERY—METHODS AND RESULTS.

In opening his remarks, he asked why it was that in many patients after an abdominal operation, when the precautions of remaining a long time in the recumbent position and wearing a bandage for a considerable time were taken, hernia followed, while, on the other hand, the patient might get up early and not wear a bandage at all, and yet no hernia follow. The method of closing the wound was the main cause. So long as the *en masse* suture was made, so long would there be danger of hernia. The making of the incision was very important. Clean sweeps of the knife should be made, no haggling, so that there would be the minimum amount of injury done to the tissues. After getting down to the peritoneum, the first two fingers should be introduced as a director. If the incision be exploratory, it should be short. Catch forceps he rarely needed to check the hæmorrhage in the wound. One-half minute should suffice to make the incision. As a ligature, he preferred the kangaroo tendon. A needle holder was unnecessary. The next was the important point, the plan of stitching in tiers, first, the peritoneum; then the edge to edge approximation of the tendinous insertions

of the oblique muscles with a running stitch, this being the important row in this method of stitching, for securing the future integrity of the abdominal wall ; then a few stitches through the fatty tissue ; then a row through the external tissues approximating the skin, this being made with the buried suture. If there was any suspicion of dirt on the wound it should be cleansed, sealed with collodion, and left undisturbed for ten days. The patient might sit up on the eleventh day, walk on the twelfth to the fifteenth, and then be allowed to go home.

The essayist then explained how he would deal with ventral and umbilical hernia. In operating for tubercular peritonitis he uses the *en masse* suture and silkworm gut. This was because the animal suture was in danger of becoming infected with the tubercle bacillus. The perfect incision and the perfect closure would leave the patient in such a condition that he or she would never be obliged to wear a truss, or carry about a hernia which would be more distressing than the original disease.

Dr. Willis G. Macdonald, of Albany, said there were things in the paper that he could not endorse. In cases of appendicitis, where there was abscess formation, followed by opening and drainage with rubber tube or the introduction of iodoform tampons, he believed the essayist would not use this method of suture. In his (the speaker's) experience the greater number of hernias had followed such cases. It was difficult to avoid them in such cases. In Albany they used the through and through suture, and in looking over Dr. Vander Veer's tables of 145 cases he found less than five per cent. of hernia. The introduction of animal suture in surgery was not always as successful as it would seem. He had used kangaroo tendon and catgut for the radical cure of hernia, and he had seen a return of the hernia. And so far as the silkworm gut in the buried suture had been used, his success had been similarly somewhat unsatisfactory. Another objection was the time it took to introduce the different rows. Time was not to be lost in such operations. He thought, too, that on account of the difficulty of sterilizing the animal sutures abdominal surgeons would not soon give up the use of silk and silkworm gut.

Dr. Reed, of Cincinnati, said that he was gratified to hear that a perfect means of closing the incision had been arrived at. If perfection had been arrived at in this point, they would hope that perfection would soon be arrived at in other regards.

Dr. Carstens said that he had used the buried animal suture, and where there was danger of excessive intra-abdominal pressure, as in fat subjects, he would fortify the closure by the addition of the *en masse* suture. What warrant had the essayist that, by virtue of retching and vomiting after anaesthesia, any case was not going to be followed by extreme intra-abdominal pressure? The painful cicatrix was due to the deposit of inflammatory exudate and the unabsorbed suture.

Dr. Cushing, of Boston, said he had tried the buried suture, but had given it up because the greater number of the cases did not heal well where it was used. The extra number of punctures was another disadvantage in the tier method. In some cases, where the abdominal wall was very thick by reason of fat, he agreed that the fasciæ would be better approximated.

Dr. Fredrick, of Buffalo, did not like silkworm-gut suture because of the irritation of the sharp ends. Their use was often accompanied by suppuration, and they were difficult to remove. Such sutures were as unabsorbable as wire. In an experience with eighty-five cases he had fifty per cent. followed by collections of pus, which he had to drain and wash out. He thought the best results would be got from the use of three or four fine sterilized catgut sutures to coapt the edges of the fasciæ. He had never seen hernia follow in cases so treated. His bad cases were where he had used the buried animal suture.

Dr. Longyear, of Detroit, stood up in defence of Dr. Carstens. He thought one of the great features in the use of the buried animal suture was to prevent what the last speaker had found take place. The two great points to secure were to have a thoroughly aseptic wound and an aseptic suture. They had had four years' experience in the plan described by Dr. Carstens, with good results. There was no need of reinforcement by external suture. The buried suture, with the sealed wound, was enough. By using the *en masse* suture afterward there was danger of carrying in infection, and the same danger was present when they were withdrawn. The fasciæ must be firmly united, and this took from four to six weeks. Where the *en masse* suture was used and removed at the end of eight or ten days, the fasciæ would be most liable to give way when strain was brought to bear upon it. He had used the kangaroo tendon buried stitch in perineal work as well, and his convictions were favorable to it. If done aseptically, he believed it would always result in success, as it had in his practice. In the *en masse* suture there was danger of the edges of corresponding tissues doubling up and union not taking place. He had used the catgut, but had found that it was absorbed too soon, and often produced abscesses.

Dr. Maclean, of Detroit, thought it made little difference which method was employed, providing strict aseptic precautions were taken.

Dr. Tappy favored the plan of suturing in layers. He had sometimes been disappointed in the kangaroo tendon; but now he had it boiled in alcohol and afterward in bichloride solution.

Dr. Carstens closed the discussion. He claimed the *en masse* suture was uncertain; there was danger of pocketing of pus, and of hernia insinuating itself between the stitches. In suppurative cases where he used the

drainage tube he would use the *en masse* suture. As to punctures, there were no more by one method than the other. He admitted that the use of silkworm gut and the *en masse* suture might answer for the general practitioner, but the method he advocated was the ideal method for the experienced surgeon. He had had no hernias following this plan of closing the abdominal incision.

PLASTIC SURGERY IN GYNÆCOLOGY.

The next paper was by Dr. Joseph Price, of Philadelphia. "Perineal Operations" was the subject. He maintained that it was necessary to carefully study anatomy and physiology to successfully do gynæcological work. The mechanism of labor must be understood, and, if rupture of the perinæum took place, the lines of rupture must be appreciated. The perinæum always broke in well-defined lines, except where produced by instrumental violence. When from this latter cause, the wound must be treated as a lacerated wound anywhere else. The other wounds must be repaired in the lines in which they occur. Under the present abdominal régime plastic work was becoming a lost art. He opposed doing an external and an internal operation at one sitting. Surgery had not for its object the showing of the surgeon's endurance, nor how much the patient could stand without collapse. It was sufficient to remember that these tears were lateral, extending out under the rami of the pubes; or central extending from the vagina towards the rectum, tending to run round the rectum instead of through it. The tears of the vagina were from within out, and from above downward; therefore the skin operation for their closure was non-scientific. The operation should be done in the line of the destruction, and it should be commenced at the uppermost end of the tear. Operation immediately was to be done where the condition of the patient would be able to stand it. Silkworm gut was the most desirable form of suture. As little tissue should be included as possible, so as to avoid strangulation. When the sphincter ani was involved, the ends of the muscle should be brought together. This was Emmet's method, and, as a procedure, it stood pre-eminent. The technique was very simple.

Dr. Cushing believed that the methods employed for this condition ran into one another. The best part of the work was to be done in the vagina. A new perineal floor was to be made. Any operation which consisted in sewing up two or three inches of skin on the outside would not hold up the uterus. Where there was a tear at labor, the speaker advocated sewing up before the delivery of the placenta. In that way no time would be lost.

Dr. Heyd, of Buffalo, said that there was no operation practised that brought about the same results as Emmet's. From the description in the

book the operation was very hard to follow, but the difficulty disappeared when one once saw it done. It was the only operation that picked up the deep fascia and thoroughly restored the perinæum. If the operation could not be done at once, the wound would heal equally well even eight hours afterward. He thought it would be wise to wait this length of time in order to secure assistance to do a first-class operation if the sphincter ani were involved.

Dr. Cordier, of Kansas City, condemned the use of multiple operation for the relief of symptoms which would be relieved by an Emmet's operation. It had done its work better than any other operation.

Dr. Carstens advocated the repair of the cervix and perinæum immediately after labor, where it was necessary. If left later, he would advise stitching up the cervix, leaving the sutures in for five or six weeks; then sew the perinæum, and, after the wound was healed, he would take the sutures from the cervix. He advocated the same method of closure in the perineal wound as in the abdominal wound. If done with the buried suture the patient escaped pain, which was present if the other method were employed. Asepsis was necessary to a successful operation.

Dr. Potter, of Buffalo, said he was glad this subject had been revived. Lately it had not been noticed so much, on account of the special importance that abdominal section had been demanding. He believed obstetricians had been neglectful of the immediate repair of the torn perinæum. It was necessary that it should be properly done—done in a thoroughly surgical manner. If care were taken in preserving the perinæum, the abdominal surgeon would lose a good deal of his work.

Dr. Dunning, of Indianapolis, said he was sorry Dr. Price had not given his method of applying the stitch in cases of complete laceration. It was difficult to get perfect results where there was complete laceration; comparatively easy where there was but partial laceration.

Dr. Longyear, of Detroit, spoke very highly of the operation. By means of illustration he showed how in old lacerations the denuding was to be done, and how the retracted muscles were to be picked up, so as to restore the pelvic floor.

Dr. Glasgow, of St. Louis, called attention to the fact that if the perinæum were immediately attended to after labor, in the majority of cases, the secondary operations would not be required.

Dr. Davis, of Birmingham, Ala., thought the reason there were so many failures after the immediate operations was that the work had been done by inexperienced men. In every case of obstetrics the physician should have everything needed to do an operation on the perinæum. He agreed with Dr. Cushing that the stitches might be put in before the placenta was delivered. The operations of Emmet, Tait, and Martin practically

accomplished the same thing. Few men used the buried stitch successfully. He was glad that it had been brought out that pelvic troubles could often be prevented by repair of the lacerated cervix and perinæum.

Dr. Hoffman, of Philadelphia, pointed out that there was sometimes great difficulty in getting the patients to agree to the operation. In handling such cases, it was necessary that the medical man should have the perfect confidence of the friends. If he has this, he may do anything he pleases. One man in the discussion had spoken of the curette; but to say that every uterus that is lacerated needs curetting was ridiculous. If there was a show of sepsis, then it was time enough to curette. The cervical tears would shrink wonderfully. A tear half as long as the finger would not be over one-half an inch long in five hours, and in two weeks would hardly be noticed at all. Where there was persistent hæmorrhage after delivery, it was often necessary to clean out the uterus and sew the cervix up. The speaker then gave his method of sewing up the ends of the divided sphincter. It would be found that the sphincter had straightened out toward the position of a straight line. It was absolutely necessary to find the end of the divided muscle, if union was wanted.

Dr. Dunning said that many men who purported to do the Tait operation did not do it. He thought bad results followed in these cases often on account of the stitches being drawn too taut. He was in favor of early repair.

Dr. A. B. Miller, of Syracuse, believed the best name for this operation was "restoration of the pelvic floor." Emmet's operation restored the deeper fascia, and in that way a body was got that would keep up the uterus. Tait's did not do this, nor did it give good lasting results. It looked very nice in a clinic. In many cases where it was found necessary to restore the perineal body, it was seen not to have necessarily followed the parturient act. There may have been no tear in the mucous membrane, but there had been loss of the perineal body through pressure atrophy.

Dr. Price, in closing, said there were too many women suffering from neglected plastic work; medical men were responsible for it. The pelvic floor should be restored in all cases of laceration where the perineal body was injured. The outside perineal operation was worthless. There was no operation that gave such pleasant results; for the symptoms were often most distressing—the sensation of everything coming down, of defecation through the vagina, etc. The buried suture was not so common now as it was a few years ago. Emmet himself had changed the operation. The scar tissue must be sacrificed. He (the speaker) had seen three women die from malignant disease which had generated in scar tissue. He did not agree with Dr. Cushing about doing the recent operation before

the placenta was expelled. There was danger of injuring the wound in the delivery of the placenta. It might introduce dirt. The speaker gave a complete illustration of the method now pursued in doing this operation. He spoke of the added value of the silver wire suture ; it acted as a splint. He considered operations done twelve or fifteen hours after as secondary operations ; and they would not be as successful as those done earlier. Men should not be kept from doing the operation simply because the husband was excited and the baby was crying. The three or four sutures necessary could be introduced in a very few minutes.

After luncheon, Dr. W. B. Dewees, Salina, Kansas, read a paper on the

CARE OF THE PREGNANT WOMAN.

He said it was unnatural for women to suffer as they do during pregnancy and parturition. In the lower classes girls are neglected ; and in the higher classes they suffered from luxurious indolence. It was necessary that there should be a revival of obstetrical learning, particularly as to the etiology of the difficulties of labor. The advanced study of human biology was the key. The diseases of pregnancy and parturition were preventable. Improper posture and dress, excessive sensual indulgence, were some of the leading causes of trouble. He believed in a wholesome forbearance from coitus during the period of gestation, and for three months following parturition. More attention ought to be paid to girls about the age of puberty. It was necessary when examining a pregnant woman to take into consideration the condition of all the systems of the body. It was also necessary to study the mental phenomena present in many cases. He advocated pelvimetry. Examination of the urine was absolutely necessary. Too early and too late marriages were deleterious to women. It was necessary that the parturient woman should observe regular hours, take plain nutritious food and drink. Exercise in the open air ; if exercise could not be taken, massage was to be recommended. The bowels and skin should be kept acting freely. Puerperal fever, or parturial sepsis, as it would be better called, might be prevented by aseptic precautions at delivery. The reader showed how malpositions of the uterus followed improper posture. The convexity forward of the sacral part of the spine was a natural support to the viscera ; but when a woman did not keep the erect posture, the weight of the abdominal viscera would come upon the uterus and displace it.

Dr. Carstens, in discussing the paper, said that if sexual intercourse were interdicted, as the reader had suggested, it would give the abdominal surgeon much to do in the way of taking out pus tubes. He dwelt on the necessity of strict asepsis in midwifery cases. The mass of the profession, he declared, did not know what antisepsis and asepsis were. Too many

of them considered it the sticking of their dirty hands into a little carbolic acid solution.

Dr. Hoffman considered pelvimetry in practice unpracticable. The patients would not submit to it. It would do little good anyway. It was merely a relative thing, for as much depends upon the size of the child's head as upon the size of the pelvis. In regard to douches, he did not think the woman required a douche; it was the doctor who needed the douche.

Dr. Longyear alluded to the subject of albuminuria. He took the ground that it would be wise in every case of albuminuria in the pregnant woman with threatening symptoms to deliver. He believed in giving the benefit of the doubt to the mother.

Dr. Reed said he believed that albuminuria was a condition that could be cured. He could see no reason why these murderous tactics spoken of should be resorted to. Unborn innocence had rights we were bound to respect. Many of these cases were curable.

Dr. Price added that another point in the care of the pregnant woman was the necessity of shutting the mouths of old women, who scared the young prospective mother by their ominous talk regarding maternal impressions. As to cleanliness, soap and water would do the work if thoroughly used.

Dr. Cushing said that he did not agree with the essayist that sexual immorality was as bad to-day as it used to be. He believed the women were reforming fast enough, faster than the profession was in its ability to take care of them. He believed in letting the pregnant woman alone. Unless there was hæmorrhage, or albuminuria, or something else to indicate a pathological condition, he believed a great deal of harm would be done if the pregnant woman was not let alone.

Dr. Jones said if this policy of interference was practised the meddling obstetrician would lose the case. The majority of his cases of albuminuria had not been followed by eclampsia.

APPENDICITIS.

Dr. George S. Peck, of Youngstown, read a paper giving reports of several cases treated surgically.

CASE I. Operation during interval of attacks; obstruction July 6; did second operation; recovery. Operation July 27. Appendix buried in mass of strong adhesions between ileum and cæcum containing large fæcal concretion. Appendix removed in segments. Ileum returned to abdominal cavity. During first six days highest temperature 100°. August 4 reopened incision, found about three feet from ileo-cæcal valve complete obstruction by band of dense adhesions. Obstruction liberated, ileum

brought out in the incision, and abdominal cavity packed with gauze. From the thirteenth day to the present time patient has had from one to three daily passages per rectum ; discharged from the hospital on the fifty-fifth day after first operation.

CASE 2. Operation during fourth day ; first attack. Large appendix removed, containing two drachms of pus and fæcal concretion. Adhesions broken up, incision packed with iodoform gauze. Uninterrupted recovery. Discharged from hospital twenty-eighth day after the operation.

CASE 3. Operation third day of the third attack. Peritoneal cavity opened, adhesions broken up ; large appendix removed ; uninterrupted recovery.

CASE 4. Operation during tenth day. Death from septic peritonitis in sixty-five hours. Large abscess cavity evacuated ; appendix gangrenous and detached ; washed out by irrigation. Autopsy revealed general septic peritonitis.

CASE 5. Perforating appendicitis. Operation during third day of attack. Death from septic peritonitis twenty-seven hours, or more, after operation.

CASE 6. Similar to previous one. Died from general septic peritonitis.

Dr. W. G. Macdonald, of Albany, also read a paper on appendicitis. He maintained that for all practical purposes all inflammatory processes in the right iliac region arose from the vermiform appendix ; that the appendix is situated intraperitoneally ; that idiopathic peritonitis does not occur. From the pathological condition and clinical history he would classify as follows : (1) Acute, perforating, fulminating appendicitis with general peritonitis. (2) Acute suppurating appendicitis with local peritonitis and abscess. (3) Subacute appendicitis. Perforation occurred much earlier than was generally supposed. Prognosis in acute appendicitis was always grave. Operations undertaken when perforation was imminent were very likely to be followed by fatal results by extension of the inflammation. The removal of the appendix was to be undertaken with great care when it lay in the wall of the abscess cavity. The third group did not require operation during the first attack ; but if repeated attacks occur, operation during quiescence is demanded, and the result is generally good.

PATHOLOGICAL SPECIMENS.

The next feature was the presenting of pathological specimens. Dr. J. F. W. Ross presented an adenosarcoma of the uterus he had removed by vaginal hysterectomy.

Dr. Macdonald showed an ink bottle he had removed after abdominal section. The patient had been in the habit of applying the neck of such

a bottle inside the anus for the relief of piles, and it had accidentally slipped in. He tried in every possible way to get it out.

Dr. Hartwig, of Buffalo, showed a clinical thermometer a patient had, while the temperature was being taken by the vagina, shoved into the bladder. By dilating the urethra he removed it.

Dr. Ross said that he had removed the tumor he presented after he had submitted a small portion of it to be examined by a pathologist, who had reported it to be malignant in character. Out of this grew a breezy little discussion, in which Dr. Maclean said, "I have removed tumors and had them reported on by pathologists, who told me they were very malignant growths, and that they would return. I have found that they did not return. And when the pathologist has reported that the disease was not malignant, I have found that the tumor often returned and killed the patient."

Dr. Macdonald said that if the specimen was an adenosarcoma from the uterus, stomach, or rectum, it was always malignant. He maintained that the pathologist had a right to the clinical history of the case. Too much was expected of the pathologist. The microscope was only an aid to diagnosis.

Dr. Price said they had a right to ask for more care on the part of pathologists; in the past they had been too careless. In regard to tumors, he believed the clinical history was a sufficient guide to the clinician. The watery discharges like meat washings were always indicative enough for the surgeon.

Dr. Glasgow pointed out that pathology was but one means of diagnosis. If the surgeon was confined to the sense of sight, he would know little. If the pathologist finds the tissue presented to him to be epitheliomatous, he may depend that it is malignant. It was difficult, he admitted, to distinguish between inflammatory and sarcomatous growths.

Dr. Ross pointed out that it was impossible from the discharge to diagnose an inflamed myoma from an adenoma of the uterus. Here the microscope would differentiate the conditions.

Dr. Cordier presented a stone of the kidney weighing three ounces. There was an absence of the symptoms of stone. The kidney retained its functions, which it is still doing. It was removed by the ordinary lumbar incision. The next specimen was also presented by Dr. Cordier, a case of ectopic gestation. Rupture had taken place at the end of six or eight weeks. The abdomen was full of blood. The only trace of the fetus was the presence of the placenta in the tube.

PUS IN THE PELVIS WITH SPECIAL REFERENCE TO APPENDICITIS.

Dr. Hoffman, of Philadelphia, then read a paper. Pus in the pelvis apart from peritonitis and appendicitis was rare. Discovery of a swelling near

the uterus was usually a sign of tubal disease. Sometimes the ovaries, tubes, and uterus were all fixed. In some cases diagnosis was very difficult. The reader then outlined the principal symptoms found when this condition was present. For the uterine discharges often present some made the mistake of curetting, a procedure which only intensified the trouble.

Dr. Morris, of New York, said, in discussing the preceding papers on appendicitis, that this disease was an infective, exudative inflammation of the appendix. There was no natural elaborate classification of the disease. Men seldom made mistakes in its diagnosis. He had removed many appendices; he had been misled in one case of tuberculosis and one case of carcinomatous disease. He had examined the contents of the appendix in many cases; foreign bodies, such as seeds, etc., were not often present. More frequently he had found little calculi, consisting of calcium phosphate and a little faecal matter, together with a small amount of fat. In two cases he had found that the fat amounted to 50 per cent. It was difficult to account for this proportion of fat, as the lumen of the appendix was cut off from the lumen of the cæcum. He thought it might have been a retrograde metamorphosis of the lymphoid cells. As to the question of dealing with cases where there was suppuration and adhesions, the procedure should be determined by each operator, who knows his own methods and the results following his technique. Every man was a law to himself. If he (the speaker) practised drainage as Dr. Price did, he could not get the same results. For himself, his plan was to separate all adhesions in almost every case of appendicitis upon which he operated. He followed the same plan in searching for every collection of pus; he did it in attempting to straighten adhering loops of bowel; but he considered it would be unsafe to teach this.

Dr. Price spoke in the highest terms of what Dr. Morris had said on the subject. He was sorry Dr. Morris did not stand out and insist on teaching others to do what he does so successfully. Dr. Price said he did not think we could brush aside the foreign body as not being an element in the causation of this disease. He pointed out that many patients suffering from this trouble were sent to Europe for their health, carrying with them pus. He regretted that the mortality was so high. He argued that surgeons with pelvic experience of tubal and ovarian disease—gynecic surgeons—would always have better results in these cases than other men. No operation for puriform disease was complete until all bowel adhesions were broken up. The subject of ovariectomy, hysterectomy, puriform disease of the tubes and ovaries were settled. Suppurative peritonitis was under discussion, and there was a difference of opinion as to what good surgery could do. Those suffering from purulent peritonitis could be saved, and should be saved. He objected to the method of stuffing gauze into the wound for drainage after the operation.

Dr. Cordier said he differed from the two preceding speakers in regard to the breaking up of the adhesions. There was a great difference between pus found in this locality and pus found in the pelvis. There was a difference in the malignity between the bacilli coli communis and the gonococcus. He believed that if the adhesions about the appendix were disturbed, there would surely be a greater mortality than if they were left alone. His plan was to make an incision, drain and treat as he would an abscess in other localities ; and he had satisfactory results. More attention should be paid to colic ; he believed it to be due frequently to appendicular trouble. In the pelvis he would agree that the adhesions should be broken down and the diseased structures removed. The same plan in appendicitis would scatter the pus, so that it could not all be removed again.

Dr. Murphy, of Chicago, said that this battle of appendicitis had been tested all along the line. The first thing they had to defend was the presence of pus. Finally, after a series of operations, and careful post-mortem examinations, it was agreed that there had been or was pus present. It was agreed that cases got well without operation ; and also with operation. What cases should be operated upon and what cases should be left without operation ? There was no credit due to him who made a record on the recurring variety. The kind they wanted to make a record on was the one in which the patient's life was in jeopardy in the greatest degree, the acute suppurative variety. The question was, what was to be done, and when was it to be done ? What happened in the first attack of appendicitis ? Were the symptoms from invasion with infection of the mucous membrane, or from perforation, or from obliteration ? The outcome of these three conditions would be all the pathological conditions found in the abdominal cavity. In the early stage the disease was circumscribed, frequently limited to the cavity of the appendix ; a few hours later to the peritoneum. What would be done if pus were forming anywhere else ? Let it out. When should it be done ? When the symptoms were unmistakable. The time to operate was immediately. The patient has a sudden attack of pain in the abdomen ; it is followed by nausea and vomiting. There is increasing tenderness over the seat of the appendix. It is time to operate. There are few conditions in the abdomen resembling that. Some say they would operate on such and such cases. There was no man living who could make a differential diagnosis of the pathological condition that exists in the abdomen in appendicitis. As to pus, there was a great difference ; some varieties were as harmless as water, and others so poisonous that a few drops would kill a dog in a few hours if injected into the peritoneal cavity. If on opening an abdomen the intestines were found to be blistered, it was an indication that the patient would die, and that very soon.

Dr. Carstens said that there were cases when he did not see the need

of breaking up the adhesions. He believed in opening the abscess where it had formed, and draining. It was impossible to say what were the mild and what were the severe cases. He was in favor of immediate operation.

Dr. Cushing said that he agreed thoroughly with Drs. Murphy and Carstens.

Dr. Davis was in favor of treating the acute fulminating variety just as he would a gunshot wound of the abdomen—by operating at once. He thought the advice given by Drs. Price and Morris would cause many deaths. In the hands of the majority of physicians, the plan of breaking down the adhesions would be disastrous. If the appendix could not be found by gentle manipulation, it had better be left alone.

Dr. Vandeer Veer said that the fact that many of the cases they were called to see were far removed in inaccessible parts of the country, where it required a day's travel to reach, made a difference in the statistics. Such were many of the cases Dr. Macdonald had reported.

Dr. Reed drew attention to the fact that McBurney's point should not be relied on as a means of diagnosis.

Dr. Ross said, if the fulminating, gangrenous form had reached the second stage, he thought it best to use tentative measures. If operated upon, then the patient was sure to die. But when the patient had reached the third stage, in which the pus is walled off, then the abscess should be opened. He believed in the immediate operation; but often the surgeon did not see the case early enough.

Dr. Hurlburt said that catarrhal trouble would produce stricture in the appendix, as it would in other small mucous passages. Post-mortem he had noted marked thickening of the circular fibres, and evidences beyond this of the circulation having been interfered with. Beyond the stricture could be seen collections of fluid, which would account for the colic.

Dr. Hartrig said that he leaned to the conservative method of treatment, as the greatest proportion of cases recovered without operation.

Dr. Maclean said that to do full justice to the cases he would advise early operation; but in many cases the friends objected. It took a good deal of moral courage to advocate operation in every case. He had known cases where the friends refused to have the operation performed, discharged the surgeons who advocated the measure, and invited in, in one case, a homœopath, under whose care the patient recovered. This was one of the difficulties they had to contend against.

Several other gentlemen took part in the discussion.

A QUESTION OF PRIORITY AS TO LIGATION OF THE UTERINE ARTERIES FOR THE CURE OF FIBROIDS.

The next paper was read by Dr. W. B. Dorsett, St. Louis. He pointed out that he was the first to introduce the method of tying the uterine

artery for the cure of fibroids. He told how he came to try this plan, and showed how those who claimed priority for his operation were mistaken.

Dr. Howitt, of Guelph, read a paper on

REMARKS ON THE SURGICAL TREATMENT OF INTUSSUSCEPTION IN INFANTS,
BASED ON TWO SUCCESSFUL CASES.

In children under one year one-third of all the cases of abdominal obstruction were due to this cause; and the mortality was seventy per cent. The essayist then spoke of the different forms of this trouble. In the first case all the classical symptoms were present. Treatment by distension was tried, but without avail. A median incision was made. The lower three inches of the ilium were found projecting through the ileo-cæcal valve. The cæcum and colon were collapsed. The prolapsed ilium refused to yield. The method employed of reducing a paraphimosis was used, and the intussusception was thus reduced. Diagnosis of these cases was not easy; operation should be done early; strict antisepsis should be employed; the incision need not be more than three and a half inches in length, and its middle should be opposite the umbilicus, if the lump were undefined. Reduction could best be accomplished by making pressure on the intussusceptions, and traction on the intussusceptions in the opposite direction. A careful replacement of the omentum was important to prevent adhesions.

Dr. Morris then chloroformed a rabbit, made an abdominal incision to expose the intestine, touched it at one point with a little piece of sod. bi-carb., and an intussusception was beautifully demonstrated; which Dr. Murphy reduced.

Dr. Morris said some such irritant in the form of a ptomaine might be an element in the causation of such a condition in the human economy.

CURE OF PERITONEAL TUBERCULOSIS AFTER SIMPLE INCISION.

Dr. Morris gave an explanation of the cure of peritoneal tuberculosis after simple incision. He had taken some of the fluid collected at an operation for this condition and placed it in an incubator for forty-eight hours. A crystallizable ptomaine was isolated. With this product bacilli of tuberculosis in culture tubes were killed. His deduction was that after an operation certain saprophytes entered in the abdominal cavity, and in the medium of the fluid left after the operation (and it was such cases, when a little fluid was left, which were most amenable to cure) fermentation took place, and this crystallizable ptomaine or tox-albumen was generated that proved inimical to the tubercle bacillus. On account of the free lymph supply of the peritoneum, the tox-albumen would be rapidly diffused to every part. These remarks were listened to with profound interest, and were the subject of a most interesting discussion.

TREATMENT OF DISTENSION OF THE FALLOPIAN TUBES WITHOUT LAPAROTOMY
AND REMOVAL.

Dr. Frank A. Glasgow, of St. Louis, read a paper containing a plea for the treatment of tubal disease by dilating the uterine orifice by means of slippery elm bark tents introduced into the uterine cavity; this would also stimulate peristalsis in the tube; these two points being attended to many cases of hydrosalpinx and pyosalpinx would be permanently relieved. There was too much of a tendency toward operative means for the relief of these conditions.

INFLAMMATORY DISEASES OF THE UTERUS AND APPENDAGES AND OF THE
PELVIC PERITONEUM.

Dr. Wm. W. Potter, of Buffalo, introduced the subject by recalling the well-known fact that the pathology of pelvic disease has been entirely reconstructed since 1860, and that now we had come to regard inflammation of the pelvic peritoneum as generally symptomatic of disease of the ovaries or Fallopian tubes or both. Mr. Tait within the last ten or twelve years, together with men who have worked abreast of him—some of whom are members of this association—have driven out the theory of pelvic cellulitis that for so long held sway, and now peri- and parametritis have been dropped from the gynæcologic vocabulary. The struggle has been a long one, but abdominal surgeons have demonstrated the truth of this proposition, viz., that pus originating outside of the tubes or ovaries in the non-puerperal state is a very rare condition, and that, speaking generally, pelvic abscesses are pus tubes. The largest number of women in the consulting rooms of gynæcologists are those suffering from pelvic inflammation or its residues; hence the importance of the subject under discussion cannot be overestimated. But, he asserted, it is only within the past seven or eight years that anything like uniformity of opinion as to the causes and proper treatment of pelvic inflammation have been adopted. Now, just as we are beginning to agree as to the essentials governing these cases, we are told by a number of agreeable gentlemen who call themselves conservatives that these diseases do not demand operation, but that they can be cured in most instances by tentative measures, such as diet, rest, electricity, and the like. By denouncing the work of abdominal surgeons as unnecessary mutilation, and stigmatizing it as castration or unsexing women, they have created a panic among the medical journals that is reaching far into the ranks of the profession. The effect of this is to turn back the wheels of time and stay the advance of progress with harmful results to suffering women. It must be admitted that these so-called conservative men are clever, which makes their subtle and dangerous doctrine all the more damaging in its results.

Dr. Reed, of Cincinnati, outlined the clinical history of these cases. One class of cases might begin with cervical trouble, cervical leucorrhœa being the principal symptom. This might be followed by obstructive dysmenorrhœa; later by pre-menstrual pain. Local pain and tenderness might develop on one or other sides of the uterus, accompanied by fever. The discharge becomes purulent. The patient suffers from exhaustion and becomes anæmic. From the parametrium the general peritoneum becomes involved and collapse follows. A second variety of cases was found in the courtesan and those infected with the poison of the gonococcus. A third class was that brought about by sepsis during abortion. The clinical picture of these forms was given.

Dr. McMurtry, of Louisville, Ky., read a paper dealing with the causation and pathology of the condition. He said that puerperal infection exceeded all others as a causative element; surgical operations on the uterus, the sponge tents, and steel dilators were other factors in bringing about inflammation of those organs. Gonorrhœa, tuberculosis, neoplasms, and malformations lead to a similar condition.

The different inflammations were accompanied by a single pathological process congestion with effusion. On the rapidity of this depended the extent and virulence of the condition. The essayist then pointed out at length the result of his invasion upon the ovaries, tubes, broad ligament, etc.

Dr. Rosenwaser, of Cleveland, discussed the treatment. First, as to the treatment of an acute pelvic peritonitis medically, all decomposition should be removed from the interior of the uterus. Hot douches were helpful, saline laxatives would often be followed by the relief of pain. He did not believe in the use of the iodides and mercury. The principle of dissolving the exudate was wrong.

As to the surgical treatment, he advised curetting if the tubes were not affected; abdominal section if abscess formation had developed.

In the chronic pelvic peritonitis rest in bed was essential; the bowels should be attended to; boro-glyceride tampons were useful in some cases; gentle pelvic massage; tonics; local electricity was also helpful. Curetting where not contraindicated, abscess opening, removal of the ovaries and tubes, would include most of the surgical measures.

Dr. Carstens advocated preventive measures. He thought if the men who had the gonorrhœal cases to treat did their work properly the gynecic surgeon would not have so much to do.

Dr. Price said that suppurative disease must be encouraged to evacuate itself. In these cases concurrent inflammations and adhesions were always present, and the adhesions must be broken down completely in order to do a complete operation. Many ovaries had been unnecessarily

sacrificed. Knowledge of the anatomy and physiology of the intestines was necessary. Puncture and drainage would not do in these cases. Hysterectomy was not justifiable unless the uterus was seriously involved.

Dr. Dorsett then read a paper on the present status of pelvic inflammation. Surgery of the pelvic viscera had made enormous strides during the past ten years. Electricity had made a feeble light, but would soon die a natural death. Often a foul uterine cavity was the seat of the trouble, and when cleaned symptoms were relieved. Total ablation was necessary when the pus was found hemmed in in the tube or ovary. Pus deep in the pelvic cavity was hard to deal with. Pus sacs near the uterine end of the tube could be evacuated by packing the uterus.

THE RELATIONS OF RENAL INSUFFICIENCY TO SURGICAL OPERATIONS.

Dr. C. C. Fredrick, of Buffalo, read a paper on renal insufficiency. He characterized this condition to be any state of the urine showing deficient elimination of the waste products, whether from functional inactivity or lesion of the kidney. In such cases it was necessary to consider the amount and nature of the urine, the character of the lesion for which the operation was necessary, and the causal relation the disease bears to the insufficiency. Minor degrees of insufficiency were not a contraindication to operation. The graver forms were contraindications, except for growths that had a causal relation to the kidney lesion. Patients with kidney disease were more liable to shock and complications. There was little choice between ether and chloroform in these cases of renal insufficiency.

SOME RESULTS OF ETHER ANÆSTHESIA IN ABDOMINAL OPERATIONS.

Dr. I. S. Stone, of Washington, took the ground that ether was not the safe anæsthetic it was generally believed to be; that albumin was often harmless, at least its presence was not always a contraindication to operation; that our methods for detecting nephritis were at fault. He proved the position he took from the citation of illustrative cases.

THE CAUSE OF THIRST FOLLOWING ABDOMINAL SECTION.

Dr. Eugene Boise, of Grand Rapids, Michigan, after stating the generally accepted proposition that thirst is a sensation indicating that the tissues of the body are in want of more water, argues that the sensation as felt in the mouth and throat is reflex, and that the real point from which the sensation arises is in the abdominal viscera; that from these the sensation is conveyed to the consciousness by fibres of the sympathetic system of nerves; that while ordinary thirst is caused by the withdrawal of water from the tissues to refill the veins depleted by excessive perspiration or otherwise, the thirst following abdominal section is caused by the withdrawal of water from the abdominal viscera to fill veins partially collapsed

by reason of diminished blood supply because of contraction of the arteries of the viscera. He briefly stated those physiological facts which are universally accepted or have been experimentally proven on which the theory is based: (1) Thirst is a sensation indicating that the tissues need more water. (2) The sensation felt in the throat is reflex. (3) The origin of the sensation is believed by leading physiologists to lie in the sympathetic system of nerves, because (a) no cerebro-spinal nerves can be found which convey the sensation to the consciousness, and (b) nutrition is presided over by the sympathetic system, and thirst is a disturbance of nutrition. (4) The origin of the sensation is probably from the abdominal organs, because (a) these are so rich in sympathetic fibres, and (b) introduction of water into the stomach so instantaneously allays thirst. (5) The sensation invariably follows the withdrawal of any considerable amount of fluid from the body; the withdrawal of such fluid causes proportionate collapse of veins and capillaries. (6) Capillaries tend to remain at normal tension, and when suddenly collapsed in any degree attempt to regain that tension by taking water from the surrounding tissues. (7) Irritation of sympathetic nerves causes contraction of the arterioles supplied by such nerves. (8) Sudden contraction of the arterioles supplying any organ is followed by lessened tension in the capillaries and small veins of that organ. (9) Abdominal section invariably causes direct and reflex irritation of the abdominal sympathetic nerves. (10) Such irritation causes contraction in some degree of the arterioles of the abdominal viscera, with subsequent lessened tension in their capillaries, and compensatory withdrawal of water from their tissues. And is it not probable that such circulatory disturbances give rise to the sensation of thirst?

The president, Dr. George H. Rohé, Catonsville, then delivered his address; subject—"Post-operative Intestinal Obstruction and its Treatment."*

Dr. Vander Veer, of Albany, then gave a synopsis of his results in 145 operations done upon the uterus and appendages. He gave a careful review of the subject of the preparation of the patient, embodying all the strong points pertaining to the technique of such work, placing great stress upon the importance of the room in which the operation was to be done being put in a thoroughly aseptic condition, and thorough cleanliness of the patient herself. The operations comprise all the varieties of pathological conditions met with in connection with the ovaries and tubes. The histories of the cases were somewhat interesting. Thirty-nine gave a history of phthisis, fifteen of carcinoma, fifty-seven of irregularity of menstruation. The mortality amounted to 11 per cent. While not criticizing

*Abstract published in this issue, page 719.

adversely the methods of other operators in closing the wound by means of different rows of sutures, kangaroo tendon, and other forms of sutures, yet he has no reason to give up his usual method of closing the wound by deep sutures of silkworm gut, placing them three or four to the inch, taking in carefully only a margin of the skin, a portion of the fascia and muscles, and not to exceed one-quarter of an inch in width of the peritoneum itself, placing much stress upon the importance of careful, thorough, complete apposition. The causes of death in the seventeen cases were as follows: Obstruction of the bowels due to a coil of small intestines becoming attached to the stump of the pedicle, causing death on the fourth and fifth day, two cases. Septic peritonitis, two cases. Immediate hæmorrhage from the pedicle, slipping of the knot within six hours after the operation, though the wound was reopened, the vessels secured, abdomen flushed, and hæmorrhage controlled, one case. Undoubted hæmorrhage from the pedicle causing general peritonitis, although no distension of the bowels was present, death on fourteenth day, one case. Shock within twelve hours after operation, one case. Shock within twenty hours after operation, one case. Autopsy in both cases revealed everything in good condition. Pulmonary infarction on sixth day, one case. Aggravated diabetes, one case. Exhaustion on the sixth day, no other apparent cause found, one case. Another case of exhaustion on the third day, the symptoms in the last two cases, including an autopsy, not revealing any other cause. Multilocular ovarian cyst, tapped twice, operation complicated with four months' pregnancy, one case. Puerperal septicæmia, one case. Intestinal obstruction on twenty-first day, one case. Advanced age, complicated with the recent effect of an attack of la grippe, one case. Delayed operation in a case of extra-uterine pregnancy possibly four months, one case. Persistent vomiting was treated with cocaine, calomel, and oxylate of cerium. Movement of the bowels was secured on the second or third day, not later than the fourth.

Dr. McMurtry said there had been no allusion to post-operative sepsis, but upon inquiry he had learned that Dr. Vander Veer had only two cases of such. These operations should be done early in the morning; this gave the surgeon a chance to watch for hæmorrhage. Where the patient had to be reopened to check the bleeding, it should be done with as much care as the primary operation; often this was not the case.

Dr. Cordier also spoke; among other things he said surgeons should always remove their rings in doing these sections.

NEPHRECTOMY.

Dr. L. H. Dunning, of Indianapolis, Ind., reported four cases of this operation, of which the following is a synopsis:

CASE 1. Nephrectomy for painful movable kidney. An unsuccessful nephrorrhaphy had been done two and a half years previously. The patient had been bedridden four years. A lumbar nephrectomy was done, the patient recovering and obtaining entire relief from pain. The author deplors the necessity of removing a healthy kidney only because movable and painful. He thinks that the success of recent methods for anchoring the kidney will obviate the necessity of such a procedure.

CASE 2. Nephrectomy for persistent hydronephrosis due to stricture of the ureter at its pelvic extremity. The tumor was mistaken for an ovarian one. It was removed by a median abdominal incision.

CASE 3. Sarcoma of the kidney in a child two years old. Nephrectomy and recovery. The tumor had been discovered only four weeks previously. A median incision (abdominal) was employed.

The writer has collected the histories of twenty cases of sarcoma of the kidney operated upon since 1885, in children under five and a half years of age. Of these, five perished and fifteen survived the operation, thus showing a mortality of twenty-five per cent. This is a surprising decrease in mortality, and is probably due to improved details in technique rather than to radical changes in the method of operation.

CASE 4. Nephrectomy for uretero-vaginal fistula following vaginal extirpation of a cancerous uterus. The operation was done four weeks after the hysterectomy. The ureter was torn across in enucleating a nodule of cancerous tissue from the folds of the broad ligament on removal of the uterus. Nephrectomy was done four weeks subsequently because of intermittent closure of the fistula and the morbid mental condition of the patient. The cancer had recurred in seven weeks, and patient died three months later of exhaustion and septicæmia.

Dr. Rosenwasser spoke of the differential diagnosis of these cases. Little dependence could be put upon the patient's statement that the tumor grew upward or downward. Patients never knew. Retro-peritoneal tumors tended to crowd the large intestine inward toward the median line; hence one could get a tympanitic sound over that region. Again, it was more or less fixed. This fixity was a feature of the ligamentous cyst, but it dipped down into the vagina, and could thus be diagnosed differentially.

Dr. Davis did not believe it was good surgery to operate on these sarcomatous kidneys where recurrence was certain and fatal. He gave the history of an ectopic gestation which he had thought was a cyst of the kidney, showing how difficult the diagnosis sometimes was.

Dr. Cordier spoke of the value of ureteral cauterization in establishing a diagnosis. He said we could look forward to the time when resection would be done for stricture of the ureter.

PROGRESSIVE CUTANEOUS ATROPHY OF THE VULVA (KRAUROSIS VULVÆ).

Dr. C. A. L. Reed, of Cincinnati, read a paper with this caption. He reported six cases in which the pathological and clinical features were characteristic. The first changes obvious to the naked eye consist of small vascular areas around the introitus vaginæ. These areas are not elevated, as if seats of merely inflammatory engorgement, but are slightly depressed relatively to the adjacent epithelial surfaces. They are exquisitely painful to the touch, and efforts at sexual intercourse are generally agonizing and futile. About this same time inspection will reveal a narrowing of the vaginal orifice, associated with diminished elasticity of the structures. The cutaneous or muco-cutaneous surfaces will now be observed to have lost a certain proportion of their pigment, giving them a more or less translucent appearance, which increases until it becomes so transparent that the larger capillaries and minute ecchymoses may be readily discerned beneath it. The skin thus affected becomes tense, effacing in a more or less degree all of the normal folds of the vulva, and narrowing the vaginal orifice until, in the case of a multipara, "incredulity may be excused when the patient states that she has borne children."

Knowledge relative to progressive cutaneous atrophy of the vulva is too nebulous to justify final conclusions. That which seems to be conclusively demonstrated may be summarized as follows: (1) Progressive cutaneous atrophy of the vulva is a distinct disease. (2) It is of very rare occurrence. (3) It is essentially inflammatory in character, differing from other inflammations of the skin in the marked progressive atrophy which succeeds the stage of hyperæmia and infiltration. (4) It is limited, in its manifestations, to the vulva. (5) It is manifestly not of syphilitic origin. (6) Its etiology is so obscure as to suggest a primary causal lesion in the trophic nerve supply of the vulva. (7) The affected areas may be successfully excised.

This was followed by a rather profound paper by Dr. Hurlburt; subject, "The Element of Habit in Gynecic Disease."

INTESTINAL ANASTOMOSIS WITH THE "MURPHY BUTTON."

On motion of Dr. McMurtry, Dr. Murphy, of Chicago, was called upon, and made some remarks in connection with the subject of intestinal anastomosis with the button. In order to get proper adhesion of the ends of gut, it was necessary to get uniform aseptic approximation of their ends; and at the same time it was necessary that there should be sufficient space in the lumen for the transmission of the contents during the time that adhesion was taking place. There must be as little irritation of the peritoneum about the bowel as possible. Every operation in the peritoneal

cavity should be performed in the shortest possible time consistent with good work. The scar resulting from an intestinal approximation should be one that would not contract. The doctor presented a specimen sent him in which approximation was made by means of the suture, and in another place in the gut where approximation had been made by means of the button. The approximations were in the same dog done on the same day. In the part sutured there was a contracted cicatrix; where the button had been inserted was very difficult to find, as the scar was almost invisible, and there was no contraction. Under the pressure of the button, the first tissue to be cut off and become approximated was the peritoneum; the next that gives way is the muscular coat, and this adheres to muscular coat. The connective tissue between the two becomes absorbed, leaving continuous muscle. The next coat to give way is the tunica propria, and then it approximates with similar tissue on the opposite side. The button was the first device, the speaker said, to accomplish the bringing edge to edge of corresponding tissues. The button had its drawbacks—defects, which he hoped would soon be overcome. Some had raised the objection that the button would cause obstruction. In 129 cases reported to him up to the present, there had not been one report of obstruction. In one pylor-ectomy he had heard of, the button had slipped into the stomach, but did not cause symptoms. He had not heard of its being stuck in the ileo-cæcal valve either. It had been retained in one case at the hepatic flexure of the colon. The only thing in the way of obstruction that was to be feared was the presence of adhesions in the gut below the point of approximation. He had learned of two cases where the button itself had become obstructed with feces. It was difficult to see how this could be in the small intestine where the contents were fluid. Where the large intestine was approximated fluid diet should be administered. The doctor demonstrated to the association the proper way of inserting the button. One important point was in making the purse-string suture at the mesenteric attachment. By making one overstitch at this point, the peritoneal surfaces of the mesenteric peritoneum at this point were nicely approximated. As to results—in intestinal obstruction they must always be bad. The question to answer was how many were due to the technique of operation, and how many from other causes. In cutting of the intestine, it should be cut so that the greatest portion will be removed from the convex surface.

The doctor then presented a faulty button that a Toronto medical man had brought from New York. Dr. Murphy said that in the button presented the cup was too shallow in both the male and the female portions of it. That, however, was not the most dangerous element. The spring was placed in the female portion of the button, which was absolutely wrong,

and made it absolutely impossible to place a string around the stem or central cylinder. The spring cup should be placed on the male side of the button; that was the side on which the spring catches were placed. The spring supporting the cup was too strong, as it would produce too rapid pressure atrophy. But the fatal defect in the button was that the edges of both the spring cup and the cup on the opposite side of the button were sharp, and would perforate the bowel before the adhesions could take place. He said that he considered this button a dangerous instrument, and the man who would put such a defective instrument on the market should be considered nothing else than a criminal.

RESTORATION OF INTESTINAL CONTINUITY WITHOUT MECHANICAL DEVICES

was the subject of a paper by Dr. Wm. E. B. Davis, of Birmingham, Ala., who said that the purpose of this paper was not to claim originality for any special technique, but rather to consider the various operations and to show that mechanical devices can in a great proportion of cases be better dispensed with by the surgeon who has had much experience in intestinal work, either on the lower animals or on the human intestine. Still there is a place in anastomotic work for bone plates, catgut plates, and other devices of this sort, and the Murphy button, but the experienced surgeon will find the field of their application very limited. These devices are of great assistance to the surgeon of limited experience in this class of work, and should be recommended in the event of an operation having to be done by one who has not had the opportunity of becoming familiar and skilled in suturing of the intestines. The Murphy button is a valuable device for cholecystenterostomy, and is superior to anything yet suggested for that purpose. The button is so small that it can pass through the intestine without causing any trouble, and it can be depended upon with almost absolute certainty to produce satisfactory adhesion and a competent opening between the gall-bladder and intestine. The end-to-end operation or circular enterorrhaphy is a dangerous procedure, from the fact that injury to the mesenteric border is liable to produce sloughing, and it is never possible to say that a surgeon will not have this complication follow the operation. Besides, any stitch method in the end-to-end operation requires so much time that it should be objected to usually on that account. The Murphy button can be used very satisfactorily for this purpose, and where end-to-end operation is to be resorted to Dr. Davis is of the opinion that this device could be used, unless the surgeon is an expert in intestinal suturing. The operation of Abbe is a plausible one, but it is not so reliable as the one which has proven satisfactory in the experimental work of the author. The incision is not made so long as in the case of Abbe, and is about three inches in length. In the case of gastro-enterostomy the intestine

and stomach are both brought into the wound, and the incision three inches in length made in both. Interrupted sutures are taken through coats of the bowel and stomach around the entire length of the incisions and are tied on the inside, the last stitch being tied on the outside and turned in. A continuous outside safety stitch is then taken through the peritoneal and muscular walls. In bringing the small intestine together the same procedure is followed, the interrupted through-and-through stitch of large silk being taken instead of an overhand stitch, as recommended by Abbe, and only one row of outside sutures, which may be interrupted or continuous, preferably the latter. This operation can be done very quickly, and is more reliable than the various ones with mechanical aids to anastomosis. Particularly is this method of operating valuable in cases of simple stricture of the bowel, and there will be a great many of these cases now, inasmuch as there are more operations done on the intestines.

Dr. F. Blume, of Allegheny, Pa., reported a very interesting case of

CHOLELITHIASIS

in a woman, thirty-seven years of age, in which the number of calculi removed, besides minute concretions, was one hundred and twenty-three, weighing fourteen drachms. The stone removed from the gall-bladder weighed four and three-quarter drachms.

Dr. Cushing, in a paper on

HYSTERECTOMY FOR CANCER OF THE UTERUS,

advocated the vaginal route of removal. In the discussion which followed, the comparative merits of this route with abdominal hysterectomy were warmly discussed. In the discussion the Trendelenburg position was stoutly condemned by some of the members as causing a great degree of shock.

Dr. Machell, of Toronto, reported two cases of

DIAPHRAGMATIC HERNIA.

The post-mortem reports were exceedingly interesting.

After the customary vote of thanks the association adjourned.

ELECTION OF OFFICERS.

The following officers were elected: President, Dr. J. Henry Carstens, of Detroit, Mich.; first vice-president, Dr. W. E. B. Davis, of Birmingham, Ala.; second vice-president, Dr. Henry Howitt, of Guelph, Ont.; secretary, Dr. William Warren Potter, of Buffalo, N.Y.; treasurer, Dr. X. O. Werder, of Pittsburg, Pa.

The place of meeting for 1895 was referred to the Executive Council for decision. It is likely that it will be held in Louisville, Ky., in September.

Medical Items.

DR. CHARLES CARTER has commenced practice at French River.

DR. J. N. E. BROWN is now living at 156 King street west, Toronto.

DR. J. A. CREASOR, Spadina Ave., has been confined to his room for the past month with a sprained ankle.

DR. STEVENSON, Bloor street, and Dr. W. P. Caven are taking a jaunt across the ocean.

DR. G. G. BREWER (*Medical and Surgical Reporter*) recommends peroxide of hydrogen for the purpose of arresting hæmorrhage, both venous and arterial.

DR. JAMES F. W. ROSS, of Toronto, started for England, October 15th. He expects to return at once, and will probably be home the first week in November.

DR. GERALD O'RIELLY, formerly of Fergus, who recently returned after a somewhat extended trip to Europe, will commence practice in Detroit, Mich., November 1st.

DR. E. LAPLACE (*Medical News*, May 19th, 1894) favors the McBurney method for the radical cure of hernia, and, as the firmest cicatricis are from burns, he suggests cauterization of a portion of the canal. In cases of small hernia he has derived good results from Bassini's method.

MEDICAL COUNCIL ELECTIONS.—It will be seen by the following that seven members of the new council have been elected by acclamation, while contests are in progress in the divisions : No. 1 division, Dr. J. L. Bray, Chatham, acclamation ; 2, Dr. J. R. Williams, Ingersoll, acclamation ; 3, Dr. W. F. Roome, London, acclamation ; 4, Dr. W. Graham, Brussels, acclamation ; 5, Dr. Brock, Guelph, Dr. Vardon, Galt ; 6, Dr. Henry and Dr. Smith, Orangeville ; 7, Dr. G. Shaw, Hamilton, Dr. D. Heggie, Brampton ; 8, Dr. D. L. Philip, Brantford, Dr. John P. Armour, St. Catharines ; 9, Dr. W. D. C. Law, Beeton, Dr. John Hanley, Waubaushene ; 10, Dr. E. J. Barrick, Toronto, acclamation ; 11, Dr. H. T. Machell, Toronto, acclamation ; 12, Dr. J. M. Cotton, Lambton Mills, Dr. J. H. Sangster, Port Perry ; 13, Dr. J. W. McLaughlin, Bowmanville, acclamation ; 14, Dr. Ruttan, Napanee, Dr. Thornton, Consecon ; 15, Dr. W. W. Dickson, Pembroke, Dr. W. Spankie, Kingston ; 16, Dr. R. F. Preston, Newboro, Dr. R. Reddick, Winchester ; 17, Dr. D. Bergin, Cornwall, Dr. A. F. Rogers, Ottawa.

COUNTY MEDICAL ASSOCIATION.—The eleventh regular meeting of the County of Simcoe Medical Association was held in the council chamber, Collingwood, on Thursday evening, Sept. 27th, the newly-elected president, Dr. Howland, of Huntsville, in the chair. The following members were present : Drs. Aikman, Ardagh, Arthurs, Aylesworth, Ball, Bird, Decker, Donaldson, Hanly, Hunt, Large, Lehmann, McGee, McFaul, McLeod, McClinton, McKay, Morton, Nesbitt, Pauling, Peters, Raikes, Ross, Smith, Starr, Stephen, and West.

The meeting was opened with a paper by Dr. Hunt, of New Lowell, on the diagnosis and treatment of scarlet fever, which was very fully discussed by Drs. Hanly and Stephen.

Dr. McKay, of Collingwood, presented a patient with an abdominal tumor, giving a full and exhaustive history of the case.

Dr. A. E. Ardagh, of Orillia, read a paper on meningitis in children, which was discussed by Drs. Morton, Stephen, and Shaw.

Dr. Starr, of Toronto, the secretary of the Dominion Medical Association, was present as the guest of the society, and read a paper, illustrated by numerous photographs, on inflammation of the frontal sinus.

In the absence of Dr. Paul Gillespie, Dr. McGee, of Midland, read his paper on the treatment of pneumonia, which was discussed at considerable length by Drs. McFaul, Stephen, Raikes, and Starr.

After an address by Dr. Hanly, of Waubaushe, in support of his candidature for a seat in the Medical Council, the meeting adjourned.

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Original Communications.

THE PÉAN-SEGOND OPERATION (VAGINAL TOTAL EXTIR-
PATION OF THE UTERUS AND ADNEXA) IN
SUPPURATIVE DISEASES OF THE
FEMALE PELVIS.

BY GEORGE H. ROHÉ, M.D.,

President of the American Association of Obstetricians and Gynæcologists.

THE proposition first made by Péan, that the uterus should be removed together with the appendages in case of suppurative disease in the pelvis, came like a shock to surgeons, even to those who are considered radical in their opinions regarding operation in inflammatory diseases of the uterine appendages. Operators who performed abdominal section and ablation of the ovaries upon indications considered totally unjustifiable by many were taken aback by a proposition so revolutionary. And yet the foremost advocate of total extirpation in the United States is one

who is known as a leader among the conservative operators. There seems, then, something in this operation that appeals to those of conservative tendencies. At first thought this would appear somewhat paradoxical, but upon further consideration it becomes evident that the operation is really conservative; for true conservatism does not consist, as some seem to think, in incompletely doing a large number of unnecessary operations, but in thoroughly doing those operations that are necessary. More careful diagnosis, more judicious consideration of the pathology and causation, and greater familiarity with the clinical history of diseases of the female pelvic organs, will result naturally in limiting the sphere of operative intervention in the course of these diseases.

There is at the present day little doubt that the large majority of cases of tubal and ovarian suppuration depend primarily upon gonorrhœal infection of the vaginal and uterine mucosa, and these cases are generally found associated with suppurative endometrial inflammation, no matter how remote the date of the original infection. It is, perhaps, possible that a gonorrhœal endometritis may be cured by properly directed local treatment, but few will be willing to admit that this is a common occurrence, even in cases where the specific inflammation is limited to the endometrium. In cases, on the other hand, where the tubes and ovaries and the pelvic peritoneum are involved, the restoration of the uterine mucosa alone is not considered probable. Hence advanced gynecologists have rightly abandoned topical treatment of the interior of the uterus in cases where the adnexa are the seat of suppurative inflammation. Many of you know likewise, from experience, the barrenness of results of such intra-uterine therapy after the removal of the appendages. How many cases can you not recall where dilatation, curetting, and antiseptic applications, even destructive cauterizations, failed to change permanently the purulent character of the discharges and arrest the hæmorrhages from the uterus after ablation of the adnexa. In these cases the uterus itself must be regarded as a *corpus delicti*; not only troublesome to the medical attendant, but a source of anxiety, of complaint, and even of danger, to the patient, for there can be no doubt of the greater liability of a womb in such a morbid condition to septic or tubercular infection and cancerous degeneration.

In cases of puerperal endometritis where there is a tubal involvement, the removal of all the affected organs would seem to be indicated. Indeed, in these cases the uterus is the source of greater danger from the large surface infected. From some personal experience, not altogether of a consoling character, I am led to the opinion that the removal of suppurating tubes and ovaries in a puerperal case is of little avail unless the uterus be removed at the same time.

The objection has been made that this operation is a serious one ; that, when successful, it deprives the woman of organs which characterize her sexually ; that, in short, while a woman may lose her ovaries and still remain a woman, yet, when the uterus is also removed, she is entirely unsexed and unnecessarily mutilated. Much of this sort of argument seems to me purely theoretical and unwarranted by facts, but its presumptively authoritative character and constant assertion give it some dignity and standing. It would seem, however, that a living mother and housewife, even though deprived of uterus, ovaries, and tubes, is more desirable than a dead woman with these organs in her pelvis. It may be said that the alternative here suggested is exaggerated, but those who have practised much obstetrics, and have verified causes of death in the puerperium by personal autopsies, know well that the conditions are not overdrawn.

In cases of dense adhesions of displaced uterus, tubes, and ovaries without pus formation, in which severe pain is one of the prominent symptoms, simple ablation of the adnexa, with release of the uterine adhesions, is usually insufficient to give relief. The attachment of the uterus anteriorly by hysteropexy or other method of antefixation, in conjunction with removal of the appendage, is sometimes effective, but the entire extirpation of the uterus with the appendages is more successful.

The complete extirpation of the uterus and appendages by the vaginal method for pelvic suppuration was done for the first time by Péan on December 12th, 1886. The case was one of endometritis, complicated with salpingitis, pelvic peritonitis, and suppurating cysts of the ovaries. The uterus was large, inflamed, painful, and fixed in the masses of exudation surrounding it. The same operation was done on the 20th of the same month. In 1888, Péan did the operation four times. He described it, with its results, in a communication to the Paris Société de Chirurgie on July 2nd, 1890, and again before the International Medical Congress in Berlin in the same year.

When first performed, the operation found few supporters, but Segond, having performed it a number of times, became enthusiastic over the results obtained. Doyen, of Rheims, began operating by the vaginal method in 1887, and, at the Brussels Congress of Gynæcology in 1892, was able to report upon 77 cases. At the same congress, Segond reported 103 cases, Péan 150, and Jacobs, of Brussels, 58. The mortality in Segond's cases was a fraction over 10 per cent. ; in Péan's, 0.75 per cent. ; and in Jacobs', 2 per cent. In a later statistical report (July, 1893), the latter operator reports 140 operations, with a mortality of 1.42 per cent. At the semi-centennial meeting of the Berlin Obstetrical and Gynæcological Society in May, 1894, L. Landau reported 38 operations, with no

deaths. It will be seen from these statistics that the mortality of what is now generally known as the Péan-Segond operation compares very favorably with ablation of the adnexa by abdominal section.

But the mere statistical comparison of the immediate results of an operation is insufficient to enable one to form a judgment upon the desirability of this or that procedure in a given case. The claim is made that the ultimate results are better when both uterus and appendages are extirpated than when the latter are alone removed. This claim finds strong support among American operators, who have, however, generally given preference to the removal of these organs by abdominal section.

Those cases of extensive pelvic suppuration in which many operators (Mundé, Kelly, Pozzi, Landau, Laroyenne, and others) puncture or incise the purulent collections per vaginam, and drain, are, as pointed out by Péan, Segond, and Jacobs, especially suitable for vaginal total extirpation. In these cases it is often extremely difficult, as well as hazardous, to do a complete operation by the abdomen. Pus sacs are liable to rupture and infect the peritoneum, and when the pus is thick and adhesive thorough cleansing of the abdominal viscera smeared with this material is exceedingly difficult. The uterus and intestines are covered with thick masses of lymph so densely adherent as to make separation and thorough cleansing sometimes impossible. In these cases some American operators (Baldy, Krug, Polk, and others) remove the uterus with the appendages, and as much of the inflammatory new formation as practicable, by the abdominal incision. By the vaginal method the work of removal is rendered much easier and less dangerous, and a large opening is left, which, if packed with gauze, makes the best possible drain. To my mind, the operation of Péan-Segond finds in this class of cases its chiefest indication.

Surgeons who have often done the adominal operation for total removal claim that by this method it is easier to deal with intestinal and omental adhesions, that everything is open to the eye, and that any injury to the intestines can be immediately and readily repaired. At first thought this seems a very plausible contention, but practically adhesions do not often materially interfere with the performance of the vaginal extirpation. If an intestinal fistula results, it usually closes readily in a few weeks under gauze-packing and cleanliness.

The objection so often made, that by the vaginal operation one is compelled to "work in the dark," has been refuted by those having much experience with this method. My own observation and experience enable me to pronounce the objection untenable. Even where one has to deal with a narrow vagina, and a uterus high up in the pelvis, every step of the operation can be guided by the eye.

Péan, Segond, Jacobs, Landau, and Doyen have generally found it

possible to remove the uterus and appendages entirely. In the cases in which this is not practicable without exposing the patient too long to the depressing effects of prolonged anæsthesia, the "open treatment," with perfect drainage, gives the patient a much better chance for recovery than does the operation by abdominal section.

The objection has been made that the shock of extirpation of the uterus with the appendages is much greater than when the latter are alone removed. Krug, Baldy, and Polk have denied that this is true of the abdominal method. My own experience teaches that in vaginal total extirpation the shock is not any greater than in simple abdominal section with ablation of the adnexa.

The pain following vaginal^{*} extirpation when clamps are used is, undoubtedly, more severe than abdominal section. It only lasts, however, while the clamps are in position, and generally moderates considerably after the first twenty-four hours. I am inclined to believe that pain is greater when clamps are employed than when ligatures are used, but I regard the former as preferable, not only because the operation can be done in less time, an advantage not to be belittled, but also because hæmostasis is more perfect. The forceps must, however, be tested for elasticity before use, must be trustworthy, and must be securely locked. When properly applied and the vagina firmly packed with gauze, protecting the mucous membrane against direct pressure of the forcep-handles, there is usually very little complaint on account of their presence.

The after treatment is no more troublesome than after a simple abdominal section. A soft rubber catheter, with a button end (Pezzer's), is introduced into the bladder and allowed to remain until the first dressing is removed. After removal of the clamps and first dressing (in forty-eight hours), the urine is usually voided without assistance.

Unless the patient is very weak, she may be allowed to sit up in eight to ten days.

After the first dressing is removed the vagina should be cleansed once or twice daily with a douche of warm water. The bowels should be moved on the third or fourth day.

Without desiring to be considered a partisan of the Péan-Segond operation in suppurative and other inflammatory diseases of the pelvis, I am convinced of its great superiority over simple ablation of the adnexa in all those cases in which the uterus is the seat of gonorrhœal, septic, or tubercular infection.

THE ANTITOXINE TREATMENT OF DIPHTHERIA.

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POSSIBLY no better example has yet been given us of practical results proceeding directly from careful scientific experimentation than the new blood-serum therapy in diphtheria and tetanus. The foundations of this work were laid in the careful study of the bacilli which cause these diseases, and the toxins which they produce, in cultures and in the animal body. It was noticed very soon that an animal which had received less than the minimum fatal dose of the diphtheria toxin had, upon its recovery from the effects of the dose, acquired a tolerance of larger doses, and that this tolerance could be greatly increased by carefully graduated doses until a considerable degree of immunity had been acquired against infection with the diphtheria germ. The next step of importance was the discovery that the blood serum of an animal thus immunized had the power of neutralizing, either in a test tube or in a second animal, a certain quantity of the diphtheria toxin. The introduction of the serum of the immune animal into a second animal conferred on the latter an immunity directly proportional to the degree of immunity of the first and the amount of serum introduced. It was naturally concluded that this immunizing action of the serum of an immune animal was due to a substance present in it, antagonistic to the toxin of diphtheria, or as it was called, for want of a better name, an antitoxine. The possibility of rendering animals immune to diphtheria by the introduction of an antitoxine led at once to the trial of the antitoxine on animals already infected, and, as one would naturally expect, it was found that much larger doses of serum were necessary to heal an established infection than to immunize against infection.

Various methods of immunization have been tried with the object of producing the greatest possible immunity in larger animals, such as sheep, goats, and horses, in order to obtain large quantities of a powerful serum for use on human patients. Behring, the pioneer in this work, uses the following method in sheep: a sufficient dose of a weakened diphtheria toxin is injected subcutaneously, so as to produce a slight febrile reaction; this is repeated until no further rise in temperature takes

place; the dose is then increased slowly until large doses (50-100 c.c.m.) produce no reaction, when he proceeds further with doses of unweakened cultures. In this manner he has immunized some forty sheep in about six months, from which, by monthly bleeding, he can obtain a large continuous supply of serum. Roun, in a paper before the International Congress of Hygiene and Demography at Buda-Pesth (*Lancet*, Sept. 22nd, 1894), gives an account of the methods used in Paris. The animals employed are horses, and, from the results, it seems a serum of much higher potency has been obtained than by any of the other methods.

A preliminary report upon the results of the treatment on human subjects appeared in 1893, but it is only within the past few months that we are beginning to get detailed statistics.

Of these some of the most interesting are those of Kossel (*Zeitschrift für Hygiene und Infectious krankheiten*, Bd. xvii.). These relate to cases treated in the hospitals of Berlin extending over a considerable period, viz., from September, 1893, to May, 1894. His results are as follows; Number of cases treated, 233; deaths, 54, or a mortality of 23 per cent.: of these 72 were tracheotomies; deaths, 31, a mortality of 43 per cent. These figures speak very favorably for the treatment, especially when it is remembered that, being hospital cases, they are more likely to be of a severer type than those in general practice. But the best idea of the results of the treatment is obtained when we take into consideration the number of days after the commencement of the disease that the injections of serum were begun. This is shown in the following table:

Day of illness.	Treated.	Recovered.	Died.	Recoveries in percentage.
I.	7	7	0	100
II.	71 (9)	69 (7)	2 (2)	97
III.	30 (7)	26 (6)	4 (1)	87
IV.	39 (14)	30 (10)	9 (4)	77
V.	25 (11)	15 (5)	10 (6)	60
VI.	17 (7)	9 (2)	8 (5)	47
VII-XIV.	41 (23)	21 (10)	20 (13)	51
Unknown	3 (1)	2 (1)	1	—
Totals.	233 (72)	179 (41)	54 (31)	77

The tracheotomies are in brackets. In the course of this series of cases it became apparent that much larger doses of serum should be used, and in the last 55 cases this was done. Of these 55 so treated, 25 of which were tracheotomies, only eight died (all tracheotomies), and of these three died of pure mechanical hindrance to respiration.

There is no immediate reaction as a result of the injection of the serum, but within twenty-four hours the temperature drops, followed more slowly by the pulse. The membrane ceases to spread, and soon comes

off, and the diphtheria bacilli rapidly disappear from the throat. An urticaria-like rash appears usually within two weeks of the injection ; this is apparently due to the action of the foreign blood serum, and not to the antitoxine.

In the Berlin report there are records of three relapses, which makes it probable that the immunity produced by the serum injections only lasts for a few weeks. The Paris results given in Roun's paper before the International Congress are equally as favorable as those given above. Of 300 cases where the diagnosis was confirmed by bacteriological examination there were 78 deaths, a mortality of 26 per cent. Roun also gives a careful analysis of his statistics, and compares them with the results in the same hospitals under other methods of treatment, but it is not necessary to repeat them here. Suffice it to say that his results agree throughout with those obtained in Germany, not only in the lessened mortality, but also in the curtailment of the duration of the disease, and the rarity of complications following.

It would seem, then, that we have in the blood-serum treatment of diphtheria something much more efficacious than anything that has yet been discovered. But we must not look for progress to stop here, because we have every reason to expect that, in the near future, a method will be found by means of which the antitoxine may be isolated from the serum, and so concentrated that smaller doses will be required, and still better results produced. This has been done, to a certain extent, for the tetanus antitoxine, and it will surely be done for diphtheria also.

[Since writing the above a method has been published (*Zeitschrift für Hygiene und Infectious krankheiten*, Bd. xviii.), which is briefly as follows : The goats are strongly immunized, when it is found that a certain quantity of antitoxine passes over into the milk ; this milk is collected, and, after separation of the fat and casein, the antitoxine is precipitated and dried. In this manner a continuous supply of the antitoxine is obtained without the serious drain upon the animal's health which the monthly bleeding necessitates.]

THE POSITION OF THE SCIENCE OF MEDICINE IN THESE LATTER DAYS.*

BY GEO. A. PETERS, M.B., F.R.C.S.,

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IN opening this meeting, as president of the Toronto Medical Society, my first pleasing duty is to thank its members most cordially for the very real honor they have done me in electing me to the highest office in their gift. In accepting the office, I can assure them that I do not lightly enter upon the duties appertaining thereto. On the contrary, I am painfully conscious of the responsibility which attaches to the chief executive officer of such a society, the more so when I recall the able and energetic manner in which my predecessors have fulfilled the duties of the position.

"May blessings be upon the head of Cadmus, the Phœnicians, or whoever it was that invented books," says the sage Carlyle, in a moment of somewhat rare eupepsia, and, when we recall the advances which medical science has made through the labors of medical societies, we may, not inaptly, beatify their originator, whoever he was, in somewhat similar terms. The advantages which we may look to reap from thus associating ourselves together as a medical society are many and far-reaching, embracing benefits to ourselves and our patients, and enabling us to contribute, to some extent, to the advance of medical science.

In these latter days we are disposed to plume ourselves upon the advanced position which our profession has attained, and to look back with self-complacent indulgence upon the crude pathology and empirical practice of our progenitors. In many respects, it may be admitted, we have cause; but, if we reflect that, fifty years hence, those who succeed us may look back upon us as well-meaning, but clumsy and benighted barbarians, we may be able to retain our becoming modesty.

THE CUMULATIVE NATURE OF SCIENCE.

Learning, in all sciences, is cumulative in its nature, and the science of medicine is a striking example of this law. The present proud position of medicine is ours largely by heredity. We are, in fact, the resultant of a

* President's address before the Toronto Medical Society.

long, tedious, and laborious process of evolution, in the various steps of which each generation of medical men—one might almost say each individual—has borne a brave and honorable part. It behooves us of this generation, therefore, to look to our laurels, to see that we contribute our full quota to the progress at present going on, so that posterity may not be able to charge to our account the "sin of emptiness." The opportunities enjoyed by the practitioner of medicine of to-day are infinitely greater than ever before, but these opportunities carry with them corresponding responsibilities, which, in accordance with common equity, it is incumbent upon us to assume. It is a startling as well as an inspiring thought that the medical embryo of to-day can, with a few years of earnest study, place himself, in relation to his profession, almost at the exact point at which even the leaders of a previous generation were obliged to leave off after a lifetime of unremitting toil and anxious research. Much of their labor was barren and unproductive, but the germs of truth survived, and were incorporated into the compendious text-books which are placed in the hands of the modern medical student.

By thus utilizing the work done by our predecessors, we are undoubtedly making progress in rapid strides, but it must be confessed that the ultimate—the limit of all possibilities as regards the development of the healing art—is not yet in sight; in fact, it is so remote that we need not seriously consider its existence, nor fear to be shocked by suddenly finding ourselves upon its dizzy edge.

THE GERM THEORY.

If there be any inhabitants upon the planet Mars, if they be observing us, as some speculative scientists claim, and if they could be supposed to take any interest in what we know as the practice of medicine, what would be the most striking characteristic of the problem which would confront them?

Would it not be the extraordinary phenomenon of a remorseless hand-to-hand battle, waged without quarter being asked or granted on either side, between a race claiming to occupy the very pinnacle of perfection of all animal life upon this earth—the self-styled lords of creation—and the meanest, the most ignoble, and the most helpless little vegetables in existence, variously known as germs, or microbes—so contemptible in size that one of the principal weapons that must be employed against them is a frightful yawning microscope? We can well imagine that a good fight is dear to the heart of the inhabitants of the war-god's own planet, but we blush to surmise what they must think of such a cowardly and ill-matched combat as this! But perhaps the combat is not so unequal as at first sight appears. Let us investigate. Bacteriologists assure us that each germ has the power, under favorable circumstances,

to reproduce itself in about twenty minutes. By a repetition of this process a single germ may, in forty-eight hours, become the proud parent of some 280 times as many little disease-producers like itself as there are human beings on the face of the earth. So that, as regards the mere question of bulk and numbers, the advantage is not where it would, to a superficial observer, seem to be.

Then as regards effective fighting qualities. Thousands upon thousands of our race succumb annually to the prowess of the germ of tuberculosis alone; the cholera bacillus brings to the dust from thirty to eighty per cent. of all it engages in conflict, and it has been estimated that in the fourteenth century the Black Plague—presumably a germ disease—carried off not less than twenty millions of people.

Moreover, the germ is invariably the aggressor. Unfortunately, we are not in a position to deny having furnished a very remote provocation. Indeed, it is recorded against us that our very first parents took an unwarrantable liberty with the vegetable kingdom, and ever since the days of Sir Walter Raleigh we must abjectly plead guilty to repeated and premeditated onslaughts upon the potato; but these too tempting edibles are very distant relatives of the germs which have taken up the quarrel and are waging such a formidable vendetta; and, since their immediate family was not molested, it certainly seems a trifle officious on their part to take a hand in wreaking such a terrible vengeance.

And we may further submit, in vindication of our own self-respect, that the methods of warfare pursued by these microbes is such as to alienate from them every vestige of the sympathy which their seeming helplessness and innocence might otherwise invite. They have no taste for the pomp and circumstance of war—the formal challenge and the brave advance in battle array. On the contrary, their tactics are treacherous and traitorous to the last degree. Witness, for example, the plan of campaign followed by the bacillus tuberculosis. This germ hesitates not to subvert to its own evil purposes the holiest affections of husband and wife; it flourishes through the clinging tenderness of sister to sister, and it lurks in the kiss which the fond mother bestows upon her trusting child. By thus taking advantage of the most admirable and beautiful touches of human nature, this fell foe to our race often sweeps whole families into premature graves in a few short years. Again, “a cup of cold water” is one of the blessings for the donation of which a sure reward has been promised, yet the cholera bacillus chooses this apparently harmless medium more often than any other as the means of entering the domain of its victim. We dignify the weapons of these germs as “ptomaines,” “leucomains,” “toxines,” “albumoses,” or “the metabolic products of their vital activity,” mainly because it is too disgusting to think what they

really are. Suffice it to say, that the arms of such germs as the bacillus *fœtidus* and bacterium termo are of such malodorous character that the stink-pots of mediæval warfare were delicate perfumery in comparison.

There are, it is true, important side issues in the practice of medicine with which, so far as we know at present, germs have no connection whatever; but, in these days, the germ theory of disease so colors the whole field of view as to practically obscure every other question. Now, this cause of disease has, doubtless, existed since the beginning of time. We know, for example, that all the firstborn of Egypt died in a single night, and we may fairly assume, without questioning for a moment the miraculous character of the epidemic, that the cause was some virulent germ, which, in this instance, was compelled to manifest a peculiar selective action. The children of Israel, very early in their career as a nation, passed stringent laws for the segregation of their lepers, though the bacillus *lepræ* was discovered so recently as A.D. 1874 by Hansen, of Bergen. We read also that Satan "smote Job with sore boils, from the sole of his foot unto his crown," though it is certain that the patient patriarch was blissfully ignorant of the fact that the immediate cause of his sad affliction was the *staphylococcus pyogenes aureus*.

In view of these facts, then, it is doubtful if any of us fully realize the importance of the stupendous discovery that has burst upon us during the last five and twenty years.

ANTISEPSIS AND ASEPSIS.

The discovery having been made, however, the leaders in our profession—among whom our own English Lister, the French Pasteur, and the German Koch tower head and shoulders above the rest of their generation—were not slow to act upon it, with the result that, for a few spasmodic years, it was even thought that, by the aid of carbolic acid, corrosive sublimate, iodoform, and other chemical ammunition, the strongholds of our at-last-revealed adversaries were to be speedily laid low. This was the brief and not too brilliant dynasty of antiseptics.

Soon recognizing, however, that to destroy germs in a test-tube is a very different thing from dislodging them from their entrenchments in the human body, and that substances which are poison to the microbe are not always innocuous to its host, it early became clear that to avoid a conflict with such a subtle enemy is even better than victory. Thus, again, was the truth of the old aphorism exemplified, that "discretion is the better part of valor," and thus, also, was established the era of "asepsis" and "preventive medicine." Accordingly, the wary physician of to-day, upon the first signal of danger, proceeds at once to place himself in an attitude of defence, and endeavors to keep the foe at bay by attention to the hygienic environment of his patient, by strengthening the resist-

ing power of his constitution, and by embarrassing the commissariat department of the microbes by a chemical disinfection of the whole area of the prospective battle-ground.

Nowhere, perhaps, is the idea of "prevention" more apparent than in the field of surgery. In fact, it may be admitted that almost all the recent advances in surgery are owing to our newly-acquired ability to prevent suppuration and inflammation with some degree of certainty, and to bring about the healing of wounds by first intention.

CONTRAST OF SURGERY ONE HUNDRED YEARS AGO WITH THAT OF TO-DAY.

To give an idea of the condition of surgery as it existed about one hundred years ago, I quote from Pilcher's interesting work on "The Treatment of Wounds." John Bell, in his delightful discourses on "The Nature and Cure of Wounds" (Edinburgh, 1795), claims that the surgeon "does all his services by observing and managing the properties of the living body, where the living principle is so strong and active in every part that by that energy alone it regenerates the lost substances, or unites in a more immediate way the more simple wounds." "Thirty years ago," he says, "surgeons had no settled notions that cut surfaces might be made to adhere; they had no motive for saving the skin, or where they had saved it they did not know how it should be used, nor how much it might contribute to a speedy cure; if they extirpated a tumor, they cut away along with it all the surrounding skin; if they performed the trepan, they performed in a most regular manner that preliminary operation which they chose to call scalping; or, in plain terms, they cut away six or eight inches of that skin which should have saved the fractured skull from enfoliation, and should have immediately covered and defended the brain; in performing amputation, they cut by one stroke down to the bone, and even when they performed the flap amputation they dressed their stump and flap as distinct sores." The subject upon which discussion ran high in Bell's time was that of procuring the repair of wounds by immediate adhesion.

The French surgeons had declared, not only that their flap operation procured an easy and perfect cure, but they affirmed that often in three days the flesh of such a stump had adhered. To this a contemporary of Bell's, O'Halloran, whom Bell characterizes as an excellent and most judicious surgeon, whose doctrine and practice were followed by all the best surgeons of that day, had replied: "I would ask the most ignorant tyro in our profession whether he ever saw or heard even of a wound, though no more than one inch long, united in so short a time?" adding, "These tales are told with more confidence than veracity; healing by inosculation, by the first intention, by immediate coalescence without suppuration, is merely chimerical, and opposite to the rules of nature."

Is it not an astounding fact that the very thing which, scarcely more than a century ago, was regarded as "chimerical, and opposite to the rules of nature," viz., healing of wounds by primary adhesion, has, to-day, become the universally acknowledged standard of proficiency in the art of surgery? This should warn us that we must not allow our egotism to prescribe limits to the possibilities of the development of medical science in the future. Yet, notwithstanding this, I will venture the opinion that in attaining the healing of wounds by first intention we have arrived at an ultimate fact in surgery. In a word, to achieve that result realizes our highest ideal in regard to wound treatment.

In his endeavors to reach this ideal, the surgeon has discovered that he must surround the wound with precautions to prevent the entrance of all possible sources of disturbance, so as to allow the reparative processes of nature to have full sway without let or hindrance. Neglecting, for the moment, all thought of mechanical irritants, we may say, in brief, that the problem he sets himself is to prevent the access of those vegetable germs which research and experience have shown to have the baneful power of destroying and consuming the lymph and leucocytes which constitute the building material employed by nature to repair the breaches in living tissues.

It is a hopeful sign of the times that, should a surgeon find that he has failed in this, and that suppuration has occurred in an operative wound the environments of which have been under his control, he not only feels chagrined, but has a vague and uncomfortable feeling that a certain stigma has fallen upon him because he has failed to reach his ideal. While such a failure should put him on his mettle and lead him to closely scrutinize the technique of his operation, I submit that he may often reproach himself unjustly for such a result. I have once or twice been shocked to see rash statements in works aspiring to be standard textbooks of advanced ideas, to the effect that any surgeon who acknowledged to having suppuration in his practice convicted himself thereby of culpable negligence, and rendered himself amenable to action for malpractice. Watson Cheyne, Tubby, and many others have shown that, if septic matter be injected into the veins of a rabbit, and a subcutaneous or even subperiosteal fracture of a bone be produced at the same time, suppuration will probably occur at the seat of fracture; and, surely, so long as there continue to occur, without obvious external wound, such instances of suppuration as thecal abscess, empyema, and acute osteomyelitis, those who are addicted to the habit of committing themselves to paper without adequate preparation and study might at least restrain themselves from making such sweeping and damaging assertions. We have much yet to learn about "blood antisepsis" and "intestinal antisepsis."

Now, while I have been exalting the value of *asepsis* in surgery, I desire to avoid leaving the impression that, in my opinion, the days of *antiseptis* are numbered. On the contrary, we still find, and no doubt shall always find, antiseptic measures indispensable in preparing the field for our operations; in the disinfection of foul and sloughing ulcers and abscesses, in cleansing recent wounds of infective material, and in purifying wounds which have been infected before coming under our care. Manual dexterity, ingenuity in designing operations, and mechanical skill in carrying out these designs, we can scarcely expect will ever be greater than in the days of Syme and Liston. These qualities are not hereditary in the same sense that the term applies to the scientific aspect of surgery. The education of the hand and eye, familiarity with mechanical principles, and dexterity in the use of instruments, are attributes that each surgeon must acquire for himself, and it must be acknowledged that the facilities which we place in the hands of our students for this object are all too small.

PREVENTIVE MEDICINE.

In the practice of medicine, as distinguished from surgery, the question of prevention of disease assumes a more comprehensive and cosmic aspect. The physician, in his capacity as a hygienist, shapes his measures so as to prevent outbreaks of disease in communities. The surgeon concerns himself with the limited area of a wound and its environments, but the physician has the larger task of surrounding a locality with the safeguards of good drainage, clean lanes and streets, pure water for drinking and cleansing purposes, and prompt and complete removal of sewage and garbage. The importance of the work of Boards of Health and of Medical Health Officers is becoming, year by year, more apparent.

In olden times, epidemics and plagues were looked upon as visitations of a retributive Providence, exasperated by the sins and shortcomings of the people; but, in these enlightened days, the advent of an epidemic of smallpox, cholera, scarlet fever, diphtheria, or typhoid fever is greeted with a feeling bordering closely on indignation, and the omniscient people immediately proceed to make a pretty careful canvass of the sins and shortcomings of the unfortunate Medical Health Officer, or Board of Health. In short, the profession has "educated the people up" to the belief that, when such a calamity happens, "some one has blundered," and hence the feeling. Is it too much, then, to hope that in a few decades some, at least, of the preventable diseases may follow the plague, or Black Death, to oblivion? Typhus fever is well on the way, and smallpox might, in a few years, be relegated to the realms of tradition were it not for the senseless opposition of a few addle-pated obstructionists.

THE FIELD OF THERAPEUTICS.

But, while great advances have been made in the prevention of disease, it must be acknowledged that the list of our *effective* therapeutic

agents is increasing with discouraging slowness. I lay stress on the word "effective," for the very obvious reason that our waste-baskets are literally flooded with new preparations for which extravagant merits are claimed, but which do not stand the test of time and experience. It is a somewhat remarkable fact that almost the only real specific we have is a vegetable alkaloid—quinine—which appears to have a destructive action upon the only *animal* parasite which infects man constitutionally. It is almost to be regretted that the more attractive field of lymphs, animal extracts, and antitoxines has enticed many investigators away from the mineral and vegetable kingdoms, which have, somewhat unwillingly, yielded us mercury, iron, quinine, opium, digitalis, and chloroform. Our curative drugs are few, indeed, but the most pronounced pessimist will scarcely deny that we have many agents which greatly palliate the distressing symptoms of disease, and not a few which have a decidedly favorable influence upon the course of a malady. As some person has wisely said: "The pilot at the helm of a tempest-tossed ship cannot curb the storm, but he may guide the distressed barque safely to her haven of rest"; and so with us, though we can seldom cure the disease, we can frequently so modify its course as to turn the wavering balance in favor of the scale of life.

ANIMAL EXTRACTS.

The bearing of advances in our knowledge of physiology is shown by the attention that is being devoted to the therapeutic value of the animal extracts. Brown-Séquard and D'Arsonval, the originators of the movement, base their expectations upon the theory that each gland, in addition to its secretion into its duct, gives something also to the blood, which may be called its internal secretion, and which is useful or necessary in maintaining the normal healthy state of the organism. For example, the thyroid gland—which, by the way, however, is a ductless gland—is now known to have a certain function in the elaboration of the fluids of the body. It is further known that ablation of that organ, or failure in its function from disease, produces that peculiar malady, myxœdema. With a correspondence of theory with fact, which is the more gratifying because of its rarity, it is found that the administration of a properly prepared extract of the thyroid of other animals has a distinctly curative effect upon this disease. As an isolated fact, this may not be considered a very important matter, owing to the comparative infrequency with which the disease is encountered, but as an example of a new departure in therapeutics it is of absorbing interest. It is now in order for some investigator to come forward with an extract of the suprarenals for the cure of Addison's disease, or with an extract of the lymphatic glands for the cure of leucocythæmia. There is a vast deal yet to learn of the physiology of many organs of the body, and when the physiologists know more of these

the experimental therapeutists may furnish us with useful extracts of the spleen, prostate, pineal gland, pituitary body, and other structures which are at present adjudged functionless. There is a large and imposing monument awaiting the genius whose happy lot it may be to isolate a useful extract of the vermiform appendix of the wombat, one of the very few quadrupeds, I understand, which are decorated with this intestinal frill. Seriously, however, if these extracts are ever to be such as to merit the confidence of the profession, it is apparent that they must be prepared with care and skill by a competent physiological chemist. There must be some attempt to realize in the extract that part of the organ which shall, when injected into the blood or tissues of the patient, be able to represent, to some degree, the function of his disabled organ. To mince up the brain, the heart, or the liver of an ox, and dignify the filtrate obtained therefrom by such pretentious names as cerebrine, cardine, or hepatine, is surely the acme of quackery. It would certainly be an excellent thing to have an examining institution, under the control of the State or some properly qualified and responsible authority, under whose judicial scrutiny all such alleged cure-alls should be required to pass before they could lawfully be placed within reach of a too-confiding public.

IMMUNITY.

A very much more hopeful outlook, however, is afforded by the work which is now being done by clever men in rendering animals "immune" or "refractory" to certain diseases. The behavior of bacteria in presence of their own excreta, and in feeding grounds that have been browsed over, as it were, by an allied tribe, or by an adroitly attenuated generation of their own species, suggested to Pasteur, Koch, and other savants, the idea of establishing such artificial conditions within the body as would render it hostile to the germs of disease, and so prevent their development.

It falls not within the scope of this paper to discuss the theories of immunity. From a practical point of view, it matters little which is correct—the theory of exhaustion of the soil as believed in by Pasteur and Cliff; the theory of adaptation as expounded by Grawitz and Flint, who believe that acquired immunity consists in the transformation of the biological function of the organism; or the theory of retention of Chauveau, who explains immunity by supposing that the bacteria first introduced secrete a material that remains in the body, and prevents a later development of the same organism. It is curious to note that variolation or inoculation of smallpox was practised from time immemorial in China and Persia. The practice was imported into Turkey, and thence introduced into Great Britain by Lady Mary Montague in 1721. Vaccination was not discovered by Jenner until 1798. Recent investigations by Eternod, Haccius, Copeman, Klein, and others, whose results were freely

discussed at the last meeting of the British Medical Association, seem to point to the fact that variola and vaccinia are really the same disease. So that probably what Jenner actually used was a virus which had been accidentally attenuated by passing through the comparatively refractory tissues of the cow. In this view of the case, then, the attenuation would be called upon to account for the fact that the vaccinia was not infectious, as the varioloid unfortunately was. At all events, these early inoculations, made, it must be admitted, in a somewhat empirical manner, were the pioneer instances of this plan of treatment, which is to-day, perhaps, the most promising feature of curative and preventive medicine. As it is only reasonable to expect, opinions differ as to the theory of action of the immunizing agents. Welch says: "We now know the protective influence of the blood serum of immune animals consists quite as much in the power to destroy the poisons produced by the bacteria as in the power to destroy the bacteria directly"; and he deduces from this fact the idea that "the antidotal capacity of the blood and animal fluids may be one of the means employed by nature to dispose of the pyogenic cocci." Pasteur, in speaking of the action of the infusions prepared from the desiccated cords of animals affected with rabies, considers "that, together with the modified virus enclosed in the desiccated cords, there exists special chemical products elaborated by the microbe of rabies which play a part in the production of immunity." Kitasato showed "that in animals, at least, by the inoculation of certain chemicals, immunity against tetanus infection may be secured; and, further, that the blood of these animals made immune against the disease may have the effect, when injected into other animals, not only of preventing infection, but of curing the disease when it is definitely established."

Gamaleia considers that immunity to certain diseases enjoyed by various animals is due to the presence in their tissues of certain "defensive proteids," which he thinks are also developed in the processes of vaccination.

Having thus merely grazed the subject of the causes of immunity, let us turn for a moment to the results which may be placed to the credit of the theory.

The results which have been obtained through vaccination against smallpox are too widely known to require more than a mere mention.

Dr. Haffkine's method of inoculation against cholera is still on its trial, but as one instance of its success the following may be mentioned: "Of 200 inhabitants of a native *bustee* (hamlet) 116 were inoculated with the protective vaccine. Not long afterwards an outbreak of the disease occurred in the hamlet; ten persons were affected, none of whom had been inoculated, and seven died. All those who had been inoculated remained free." At all events, Haffkine's work has made so great an

impression in India that the municipality of Calcutta voted unanimously to devote a sum of money to thoroughly test the system for two years.

Smallpox and cholera are the only two diseases which have so far been proceeded against systematically by vaccination. The use of "lymphs," "antitoxins," and "defensive proteids" in other diseases partakes more of the nature of curative than of preventive measures, but the results which have been obtained are scarcely less encouraging. Pasteur has been able to reduce the mortality in rabies from 80-90 per cent. to less than 1 per cent.

In the Children's Hospital, in Paris, the mortality from diphtheria has been reduced from 50 per cent. to 26 per cent. by Roux's antitoxin system. Tizzoni and Cattani have had gratifying results in a number of cases of tetanus. Among the lower animals it appears that experimenters can, with the greatest ease, produce immunization against almost any disease. Millions of sheep in various parts of the world are absolutely protected from anthrax by inoculation. Mice, rats, guinea pigs, rabbits, cows, horses, and other animals, have been immunized from septicæmia, cholera, tetanus, glanders, anthrax, and diphtheria, and it is surely only a question of time when these desirable exemptions may be extended to man.

But while we are encouraged to hope that, in the near future, we may learn to prevent many diseases and to cure others, there still remains a vast number of diseases upon the prevention of which we have as yet had little light thrown. The whole class of tumors, malignant and non-malignant; the congenital deformities, such as club-foot, harelip, and monsters of all kinds, are generally agreed to have a cause which exerts its malevolent influence before birth, and of the nature and prevention of which we are practically in total ignorance.

We also have to lament our impotence in the prevention and cure of the slow and insidious inflammatory diseases, such as locomotor ataxia and other scleroses of the nervous system, atheroma, rheumatoid arthritis, Bright's disease in its chronic form, cirrhosis of the liver, etc.

THE NEUROSES AND INSANITIES.

Preventive medicine finds ample scope for the exercise of its mission in the field of the nervous and mental diseases. That pitiable class of our fellow-men who are the subjects of disturbed mental equilibrium seems to be doomed to perpetual despair, so far as benefit from treatment is concerned. The figures of Tuke and Bucknill, Thurman and Pliny Earle, have shown that, "out of eleven persons who become insane, nine ultimately die insane, and, of the remaining two, but one entirely recovers." One of the saddest features of this subject is the fact that, so far from our being able to prevent insanity, that malady is distinctly on the

increase. In the Milroy Lectures, 1894, Dr. John Berry Haycraft showed, in a very interesting manner, that, in a chart compiled from the Registrar-General's Reports (Great Britain), the curves representing the prevalence of the neuroses and insanities are almost the exact reverse of those showing the fluctuations of the zymotic and infectious diseases. While the growth and development of hygienic and preventive medicine are slowly overcoming the virulence and spread of the zymotic diseases, the insanities and neuroses are on the increase, owing, as explained by Mercier, to the increase of their factors, viz., heredity, on the one hand, and, on the other, the increase in the complexity and severity of the stresses of social and civilized life. In the discussion on "The Prevention of Insanity," at the late meeting of the British Medical Association, the general feeling seemed to be that the time is not yet ripe for legislation on the subject, but that the way must be slowly prepared by the education of public opinion. The president of the section of Psychology expresses himself as being "convinced that the only way to really diminish and stamp out insanity is by so educating public opinion that those who have been insane or are threatened with insanity shall, in the face of such public opinion, abstain from bringing into the world children who must certainly contain in them the potentiality of insanity, who will some of them develop it if others escape, and so will hand on the heritage from generation to generation, till the race dies out."

OUR INTERFERENCE WITH NATURAL SELECTION.

As a race, it cannot be denied that in these latter days we are deliberately interfering to a very appreciable extent with the processes of natural selection. How many rickety, syphilitic, scrofulous, tubercular, and imbecile children are kept alive through the agency of our hospitals, and raised by excessive care and pampering through a sickly and unhappy childhood! Such objects are exultingly pointed out as triumphs of the healing art; they struggle on past puberty, marry early, generally seeming to prefer consorts a little worse than themselves, and, since they seem to retain the power of reproduction with great pertinacity, frequently have large families, who partake of the vicious physical and mental qualities of both parents. In this connection I cannot do better than again quote from Haycraft, who puts the case very strongly: "I do not see how we can shirk the fact," he says, "that preventive medicine and civilization, between them, have already deteriorated in a very marked degree the healthy vigor of our race. If things continue in their present course, it is fair to assume that in a hundred years or so the wretched products of our race—embodiments of every constitutional disorder transmitted by ancestry from whose ranks the diseased have not been weeded out, before the child-bearing period was over, by those natural agencies hitherto free to

act—will drag out their lives, martyrs to surroundings which they have tried to mould ; they who, as a race, should have been moulded by their surroundings. Preventive medicine is trying a unique experiment, and the effect is already discernible—race decay. But the experiment has gone quite far enough, and it should be modified to produce a different result. Why should the microbe select ? Why not public humanity and public reason, since selection there must be ? This appears to be the only possible solution of the difficulty, for it is not to be desired that preventive medicine should cease from making war upon the microbe, provided other selective agencies are used to replace them. Is it not our duty, by boldly facing facts and publicly stating them, to endeavor to bring about such strong public opinion as will force people to look upon the act of giving birth to a diseased child as one of the most cruel sins ?”

Powerfully and ably as these sentences place the subject before us, it seems to me that the question of the destination of the race is too large for us. Its solution must be left to the omniscience and omnipotence of Him who determines the destinies of man and microbe. We have been largely endowed with the instinct of self-preservation, and with intellect to guide that instinct. Our instinct is unselfish, in so far as it extends to our fellows ; it is tender and sympathetic inasmuch as it embraces the preservation and welfare of those weaker and more helpless than ourselves ; and it is merciful in that it drives us not to the wanton destruction of other forms of created life, though we grant that no scruple restrains our destructiveness, when necessary in self-defence, or when required for our subsistence and the continuation of our species.

Certain it is that, individually, we need not let the responsibility for the deterioration of the race rest heavily upon us. The circle which each of us has to fill in the economy of creation is an extremely narrow one. The standard which we try to live up to in our profession has been slowly evolved through the long ages, and we believe that we are realizing our highest ideal when we do our utmost to preserve and prolong human life, whether that life is manifested in the glorious body of a stalwart, godlike man, or in the shrunken frame of a feeble, wailing infant.

HÆMATOCELE DUE TO EXTRA-UTERINE GESTATION.*

BY DR. J. P. KENNEDY,
WINGHAM, ONT.

Mr. President and Gentlemen :

ON the 9th day of June last, I was called to see Mrs. B., æt. 33, mother of three children, the youngest six years of age. Had had several miscarriages, the last one occurring about three years ago. Said she had had womb trouble the last five or six years, and had been treated for it by several physicians. She now complained of menorrhagia. Said she had been flowing off and on for the last four weeks, and also had at intervals during that time slight crampy pains on the right side. Once or twice these pains had been so severe that she had resorted to a morphine pellet for relief. Her temperature was normal, her pulse good, and she was up and around attending to her household duties. I advised rest, and prescribed potass. brom., tinct. hyoscy., and some 3 grs. ergotine pills. I saw her again two or three times during the week, and as the flow still persisted advised an examination. At the time I suspected the possibility of extra-uterine pregnancy, but as I could find no swelling, nor bulging, nor apparent enlargement of the tube, I dismissed the idea from my mind. There is no doubt now, judging from the subsequent history of the case, that there was enlargement of the tube at that time, and I should feel chagrined, indeed, at not having discovered it if I did not know of men of eminence who have made similar mistakes. Amongst others, I have personal knowledge of a case that went to Lawson Tait desiring operation. Upon examination he dismissed her, telling her that she had no tubal trouble requiring operation. In the course of a month or six weeks she returned, and insisted upon operation to relieve her sufferings. Upon abdominal section Tait encountered the most formidable adhesions. In speaking of these cases Tait says, in his "Lectures on Ectopic Pregnancy": "Absolute accuracy of diagnosis in the abdomen is very far from being possible; only the ignorant assert that it is, and only fools wait for it." Failing to discover any enlargement of the tube, as I have said, I dismissed the notion of tubal pregnancy. As the uterus was

* Read at the meeting of the Huron Medical Association.

somewhat enlarged and tender on bimanual examination, I considered my case one of endometritis, and advised curetting. This I accordingly did on the 18th day of June, scraping out about two teaspoonfuls of fungous material. I washed out the uterus with a carbolic solution, and applied Churchill's tincture of iodine to the endometrium. There was no return of the hæmorrhage, no fever, and the patient did well for a week.

On the 25th of June, just one week later, I was called up suddenly, and told, by the messenger, that Mrs. B. was dying. I hurried over, and found her almost in a state of collapse, pale and faint, vomiting, and suffering the most agonizing pain in pelvis. I gave her sufficient morphine hypodermically to control pain, and applied hot stupes to the abdomen, ordered vaginal douches of carbolized solution (1 in 40) as hot as could be borne, a gallon every four hours. Next morning when I saw her the pain was comparatively easy; temperature, $103\frac{1}{5}^{\circ}$; pulse, 108. Prescribed quin. sulph., grs. iv., every four hours, and Rochelle salts, \mathfrak{z} i., every three hours till bowels moved. I was at a loss to account for this sudden attack of what I considered pelvic cellulitis—couldn't believe it was septic, as the instruments had been sterilized thoroughly, and I had taken the usual precautions in preparing my patient for the curetting. I now know from the subsequent history of the case that rupture of the sac had taken place, and this accounted for the hæmatocele found subsequently. Upon vaginal examination soon found bulging and fullness behind, and to the right went in Douglas' cul de sac, and rather inclined to the opinion that I had an abscess forming. In three or four days the temperature was down to normal, and remained normal for four days, when she had another acute attack, although not so severe as the former. At this time Dr. Towler saw her with me. He, and Dr. Chisholm, who saw her a few days before, believed it to be a case of pelvic abscess. From this time forward temperature ran from 100° to $101\frac{2}{3}^{\circ}$, and once to 102° ; pulse from 92 to 108. Patient suffered no pain, excepting a soreness and constant ache, with occasional sharp shooting pains in the right side. Swelling was gradually increasing in size, but as there were no urgent symptoms, and as I could never satisfy myself that there was fluctuation, I believed I was not justified in adopting any radical measure, and hoped to see the mass subside, in time, under palliative treatment. I may say that only twice during her illness did she complain of chills, and they were very slight.

July 20th. Dr. Macdonald, jr., saw her with me, and considered it a case of pelvic abscess.

From the 28th to 29th of July swelling increased very rapidly in size, and now reached the umbilicus, and I concluded that the time had come to take some active operative procedure. Dr. Macdonald, sr., now kindly saw her with me, diagnosing pelvic abscess, and strongly advised opening

from the vagina. I was rather of the opinion that the swelling could be better got at, and more satisfactorily dealt with, by abdominal section. I accordingly wired Dr. Meek, from London, to come up and see the case. Dr. Meek came the following morning, and putting patient under chloroform, assisted by Drs. Macdonald, sr., and Towler, I aspirated from the vagina, and drew off nothing but blood, proving the swelling to be a hæmatocele. From the history of the case Dr. Meek now diagnosed hæmatocele, due to extra-uterine pregnancy, and advised abdominal section; but, as surroundings were not favorable for immediate operation, advised that she be sent to the hospital. On the way down she suffered some pain, requiring morphine, gr. $\frac{1}{4}$, to ease. 7 p.m., temperature, 103° ; pulse, 100, weak.

July 31st. Morning: Temperature, $100\frac{2}{5}^{\circ}$; pulse, 100, weak. Did not rest very well during the night.

4 p.m. While nurse was not in room, got out of bed, on chamber, to have motion of bowels. Had severe abdominal pain and faintness. Was assisted back to bed. Soon after this temperature ran up to 105° ; pulse, 120, weak. It was intended to wait a few days before operating, to see if acute symptoms would not subside, but, after this rise of temperature and pulse, decided to operate on following day. Examination of urine showed albumen pus and casts, so that patient was not in most favorable condition for operation.

Aug. 1st. Temperature went down gradually during the night, till it reached 101° this morning. Pulse, above 100. Considerable abdominal pain during night.

Operation at 2 p.m., by Dr. Meek, assisted by Dr. Eccles and myself. Incision to right of linea alba, over the most prominent part of tumor, thinking possibly peritoneal cavity might be shut off at this point, and that the sac could be emptied without entering general cavity. It was found, however, that peritoneal cavity was not shut off. Over surface of tumor which presented in the wound omentum was spread out and adherent. Adherent omentum was separated, and under it was found some sero-purulent fluid. Thinking the sac might contain pus at this point, a small aspirating needle was introduced, but no pus found. The opening in the sac was enlarged, and it was found to contain thick blood-clot and some syrupy, liquid blood. The clots were partly scooped out with the fingers, and then an effort was made to enucleate the sac, but it was found that the posterior wall, low down, was formed by adherent coils of intestine and omentum. In separating these, the blood sac was broken into. More than a quart of blood-clot was rapidly scooped out with the fingers from behind the right broad ligament, Douglas' pouch, and behind the left broad ligament. On the right side, the right

ovary was found down on posterior surface of broad ligament, embedded in the mass of blood-clot. On the left side, tube and ovary were above and in front of blood tumor. Right tube was found extending out from right cornua of uterus, in the upper and back part of roof of tumor on right. Towards outer extremity it was dilated to about the size of a small orange. Broad ligament on this side was transfixed close to uterus, and the tube, with its corresponding ovary, ligated and cut away. On left side, broad ligament was considerably shortened, and the ovary and tube bound down from peritonitis, and it was deemed advisable to remove them. Patient being in Trendelenburg posture, the walls of the hæmatocele could be easily made out, and it could be seen that the anterior wall was formed by the posterior surface of right broad ligament, posterior surface of uterus, and posterior surface of left broad ligament. The posterior wall was formed by rectum, low down, and, above this, the sigmoid flexure of colon, adherent coils of small intestine, appendix vermiformis, and omentum. Roof on right side by arching broad ligament, and right tube covered over by adherent omentum; in median line, by adherent coils of intestine and omentum. The greater bulk of tumor was on the right side, and the mass sloped off to the left down behind left broad ligament, with its ovary and tube, and between it and the sigmoid flexure of the colon. The floor of the mass was low down behind cervix, in Douglas' pouch. It could be seen, therefore, that it was an intraperitoneal hæmatocele, caused by rupture of the right Fallopian tube. After scooping out all organized blood-clot, etc., from pelvic cavity, and removal of appendages, the peritoneal and pelvic cavity was thoroughly flushed out with hot water, and drainage by iodoform gauze, and glass drainage tube introduced to bottom of Douglas' pouch. There was not much active bleeding during operation, and very little oozing after. The abdominal wound was closed by interrupted silkworm gut sutures. Examination of right tube after removal; dilated part cut open, and sac, about the size of a hen's egg, found, with smooth lining, and, at one point, a thick, fleshy mass about the size of a fifty-cent piece. No foetus was found.

The following history of case after operation and result of post mortem was kindly furnished to me by Dr. Meek :

Patient rallied very well after operation, with pulse of 86, and temperature 100°. During night she vomited a few times.

August 2nd. Morning : Temperature, 100 $\frac{2}{3}$ °; pulse, 110. Very little pain or distension; looks well; some vomiting still; quantity of urine sufficient.

Afternoon : Temperature, 103°; pulse, 120. Tympanites; quantity of urine less. Ox-gall enema brought away gas and lowered temperature some, and gave relief.

August 3rd. Morning : Did not rest well during night. Temperature, 103°; pulse, 140, weak. Quantity of urine deficient. Bowels have moved with enema, showing no obstruction. Gradually got weaker, and died at 2 p.m.

Post mortem. No hæmorrhage. Pelvis well drained. Rectum and a portion of small intestine very dark and congested, but very little peritonitis. Both kidneys were found enlarged, and unhealthy in appearance. (Have not yet received microscopic report.) The urine examined after operation was found to contain albumen, pus, and casts.

This case was, without doubt, a case of tubal pregnancy, which ruptured into peritoneal cavity about the second month. Why the hæmorrhage was not fatal at the time of rupture can be explained, I think, by the fact that the rupture, in all probability, took place between the layers of the mesosalpinx primarily and subsequently into the peritoneum after inflammatory exudations had formed adhesions, shutting off the pelvis from the general cavity. The gradual increase of tumor was evidently due partly to inflammatory exudation and partly to gradual recurrence of hæmorrhage. There is little doubt that there would have been suppuration in a short time if the case had been left to nature, and I think from the dirty, grayish, necrotic appearance of upper part of sac there would likely have been general peritoneal infection and death. Death was, no doubt, due to septicæmia, complicated by nephritis. If one could always recognize the nature of these things, the sooner after primary rupture such cases are operated on the better. If not operated on soon after rupture, acute symptoms of inflammation set in. Then, if symptoms are not urgent, it is usually safer to delay operation till acute symptoms have subsided. If there are symptoms, however, pointing to probable suppuration, there should be no delay. Pus should not be permitted to form if possible. To have attempted to empty this kind of hæmatocele through pouch of Douglas from vagina would, in all probability, have been disastrous. The posterior wall of sac being made up of adherent coils of intestine and omentum, it is likely that in attempting to scoop out the blood-clots this wall would have been broken, and general peritoneal infection result; or, if wall was not broken, the tube with its foetal sac and placenta could not have been removed in this way, and there would have been primary risk from hæmorrhage into sac, and secondary, almost certain, risk from decomposition and suppuration at site of placental attachment.

Dr. Meek, in his note to me giving result of post mortem, adds : " Though result in this case was fatal, I am none the less convinced, from my own personal experience in such cases, that by abdominal section we can save a larger percentage of these women than by any other form of

treatment. The introduction of the aspirating needle into the mass in this case was a mistake, and, I am satisfied, did harm. In another such case I should prefer confirming my diagnosis from the abdominal side by opening into the peritoneal cavity, rather than by aspirating per vaginam. In a case of large suppurating hæmatocele recently operated on," he adds, "I made my diagnosis from abdominal side by attacking the tumor by abdominal section, and, from the smooth after-progress of the case, I have not had reason to regret it." In conclusion, allow me to say that probably the largest number of cases of hæmatocele is due to rupture of an extra-uterine gestation sac, but cases of ectopic pregnancy in any form are, as we all know, comparatively rare. Is it not possible, however, that they may occur in the practice of the general practitioner occasionally, without being recognized? This very case I am speaking of would never have been known as a case of extra-uterine gestation had it not been for operation on a subsequent post mortem. If the operation had not been done the case would have, in all probability, succumbed, as I have already said, in a few days, from general peritoneal infection, and the cause of death would have been given as pelvic abscess or peritonitis.

Clinical Notes.

SPINA BIFIDA.

BY DR. BARNHARDT,

Assistant Surgeon to St. Michael's Hospital,
TORONTO.

Mr. President and Gentlemen :

THE specimen I present this evening is from an infant with the following history : Female, born at full term on February 27, 1893. General appearance of child quite natural and healthy. A soft, glistening, fluctuating tumor, about the size of a hen's egg, was observed in the lumbar sacral region of the spine. When the child cried the tumor became quite tense, and though by gentle pressure it was possible to displace the fluid it returned immediately the pressure was removed. The anterior fontanelle was large ; the posterior one with the sagittal and lambdoidal sutures was open ; the parietal bones were easily movable, showing, in all, a considerable delay in the development of the cranial bones.

There was almost complete lumbar paraplegia. The calf muscles of the leg were absent ; the hamstring muscles of the thigh could be distinguished on the left, but not on the right side. There was contracture of flexor muscles of thigh, most marked on right side ; there was talipes varus of right foot. Defæcation and urination were performed naturally. The spine was short, as shown in the accompanying sketch ; the anus was prominent, and displaced an inch backwards and upwards. At eighteen days the patient succumbed to an attack of cerebro-spinal meningitis, originating in the tumor.

An autopsy was made twelve hours after death, at which nothing was done except to excise the tumor, with the lower half of the spinal cord, and examine the vertebræ. The accompanying figure illustrates roughly the appearance of the spine. There was right lateral curvature in the lower dorsal and lumbar region ; the laminæ of the vertebræ were undeveloped below the ninth dorsal, excepting a partial development of the tenth dorsal. The inferior half of the spine was abnormally short. The cord was

*Read before the Pathological Society, Toronto.

found to terminate in the tumor at the tenth dorsal vertebra. The location of the fibres of the cauda equina has not yet been made out, owing to the specimen being still incompletely hardened, but from the distribution of the paralysis it is quite evident that some of the trunks which go to form the sacral plexus have been implicated in the deformity. The specimen is now in a two per cent. solution of pot. bichromate, and when properly prepared the results of further investigation with the aid of a microscope will be made known to the society.

A CASE OF LOCOMOTOR ATAXIA GREATLY IMPROVED BY SUSPENSION.

BY DR. HUGH A. CUTHBERTSON,
CHICAGO.

MR. M., a man aged 36 years, was engaged in office work, and consequently not exposed to inclement weather or great fatigue. He never had syphilis, but had gonorrhœa five or six times, and he indulged in sexual intercourse to excess. He both chewed and smoked tobacco.

Symptoms. In 1888 the nail of the great toe blackened, and, after inflammation of the matrix, with suppuration, was cast off. Soon after this the patient had slight lightning pains at long intervals. Then there was loss of knee-jerk. There were no eye symptoms of any kind, and the arms were never affected. At this time the patient's rectum was very sensitive, so much so that, when riding in the street cars, he had to stand up when the car bumped over tracks. Later he had difficulty in passing urine, and he was constipated for two years, having to use cascara sagrada during that time. There was anæsthesia of the legs, and, when he crossed his legs with his eyes shut, he could not tell which leg was uppermost. When his legs were pricked with a pin he did not feel the pain for some time.

When the patient stood with his eyes shut he swayed from side to side, and when washing his face he had to steady himself. He had to keep his eyes on the ground when walking, and he had the characteristic gait of lifting his feet high and bringing them down, striking the ground with the heel first. He never had the cushion feeling on the soles of his feet.

In the fall of 1889 he lost the use of his legs, and had to resort to a wheel chair as a means of locomotion. He consulted Dr. N. S. Davis and others in Chicago, who recommended electricity and no attempt at exercise. He was also told that suspension would do him no good.

In the spring of 1890 he was taken to the Home for Incurables on 55th street, and on June 1st bought a suspension apparatus, and had his room-mate suspend him for from six to nine minutes every other day, being completely lifted off his feet. He kept up the electrical treatment

for a time, and then gave it up, basing his hope on suspension and exercise as a means of cure. He at once wheeled himself out on the balcony, and, taking hold of the railing, walked from one end to the other, increasing the distance each day.

In from fifteen to eighteen months he was able to abandon the wheel-chair and get about with the aid of two canes. In six months more he was able to get about with one cane, and he was now able to walk to Washington Park, a distance of four blocks, but he had to rest frequently in the journey, and when he came home he felt perfectly exhausted. When he came into the hospital he could not sleep well at night, but was very restless, tossing from side to side ; but now he sleeps well all night, and wakens up in the morning greatly refreshed. He kept gradually increasing the length of his walks. For the last six or eight months he has been going without the aid of a cane, walks up four flights of stairs three or four times after breakfast, and then six or seven miles in the streets. He spends the afternoon playing croquet.

The bladder and rectal symptoms have almost entirely disappeared. When walking he still staggers a little, but his feet are not lifted so high as formerly, and he says he is regaining power in the front part of the foot and toes.

When he shuts his eyes he still sways to and fro. He thinks that in those cases where suspension has been used and failed, it was not kept up long enough. He has used it continually, every other day, since he entered the hospital.

Of the dozen cases that have been in the hospital since this man entered, but two have been caused by syphilis. It is a noticeable fact that none of these patients are able to use crutches. They all use canes.

Progress of Medicine.

THERAPEUTICS

IN CHARGE OF

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AND

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TREATMENT OF NOCTURNAL ENURESIS.

Dr. D. MacAlister (*The Practitioner*), having first examined the patient to see that no surgical aid is required, gives atropine and strychnine in doses gradually increased. Eserine salicylate, instilled into the eyes, may be used to counteract the action of atropine on the iris. The patient is awakened in the middle of the night, and at early morning, for the purpose of emptying the bladder. The medicine is administered at 9 p.m., and no liquids are allowed after 6 p.m. The secret of success in this method of treatment lies in giving the drugs, especially the atropine, to the full limit of tolerance.

THE BEST FORM OF GLYCERINE-JELLY

Dr. M. Hodara, of Constantinople, after some investigations into the properties of Unna's glycerine-jelly for the treatment of eczema, concludes that it should melt at a low temperature, and set at a comparatively high temperature. He gives the following formulæ, which fulfil the above requisites:

For a soft jelly, melting point 100° F., setting point 82° F., the following formula is best:

R.—Zinci oxidi.....	20	parts.
Glycerini.....	12.5	"
Gelatinæ.....	12.5	"
Aquæ.....	55	"

If a hard, contractile jelly is required :

R.—Zinci oxidi.....	25	parts.
Glycerine.....	10	"
Gelatine.....	15	"
Aquæ.....	50	"

This melts at 102° F., and sets at 87° F.

THIOFORM.

Thioform, a chemical combination of bismuth, sulphur, and salicylic acid, has been brought forward as a substitute for iodoform. It is a tasteless and odorless powder of a greenish-yellow color. When used as a dressing for ulcers, wounds, burns, etc., thioform has shown itself to be equal, if not superior, to iodoform. However, the specific action of iodoform in tuberculous affections could not be expected from the use of thioform, as the latter does not contain iodine. Finally, thioform has been used internally in doses of fifteen grains. Its action was similar, but superior, to bismuth salicylate.

PRURITUS ANI SUCCESSFULLY TREATED WITH CHLORINATED LIME.

N. K. Berger (*Zemsky Vrach*) inserts into the anus, about one inch deep, a pledget of cotton soaked in liquor calcis chlorinatæ, and left there until smarting occurs, when it is withdrawn, and the anus bathed with the same solution. The operation is to be repeated. Swelling of the parts, concomitant dermatitis, or eczema, are said to be cured by a few applications.—*The American Journal of the Medical Sciences*.

BONE MARROW IN THE TREATMENT OF PERNICIOUS ANÆMIA.

The usefulness of this substance in pernicious anæmia was shown by Prof. Thomas R. Fraser in a valuable paper read before the International Medical Congress at Rome. He gave a very complete clinical history of a case in which no benefit occurred during the prolonged administration of both medium and large doses of iron and arsenic, but that rapid improvement resulted from the administration of ox bone marrow, both with and without iron and arsenic. The bone marrow was given by the mouth, uncooked, and in a quantity of three ounces daily.

THE ELECTRICAL TREATMENT OF UTERINE FIBROIDS AND SUBINVOLUTION.

Dr. F. W. N. Haultain (*Edinburgh Medical Journal*) contributes a valuable paper on this subject. He sums up his article with the following conclusions :

(1) The constant current is of the greatest value as a uterine hæmostatic when due to small fibroids and subinvolutions.

(2) It is curative in most cases of endometritis.

(3) That it reduces measurably the size of a certain proportion of fibroid tumors, while upon the majority it has a salutary though less decided action.

(4) That its action on fibroids larger than a seven months' pregnancy is not curative, but temporarily palliative.

(5) That it reduces the size of subinvoltuted uterus.

(6) That beneficial constitutional effects are rapidly promoted.

(7) That its method of hæmostatic action is both local and interpolar, the latter being, probably, the most potent.

TREATMENT OF URTICARIA.

In the *Journal de Médecine de Paris* for April, 1894, is an article upon this disease, from which we make the following abstracts :

The indications which are to be met in its treatment are the removal of the cause and of the symptoms. It is to be remembered that among the causal factors are a large number of vegetable substances and parasites, and that, in addition, fish, shell-fish, and similar articles of food may produce these symptoms. Among the important drugs which produce urticaria are antipyrin, arsenic, copaiba, chloral, salicylic acid, santonin, the iodides, bromides, and turpentine. Often these eruptions can be relieved by external applications, and of course the causative factor in the eruption should be removed.

For the urticarial diathesis a severe alimentary régime should be instituted. Red meats and similar substances should be avoided, and only white meats taken. Heavy rich foods are also to be avoided. Should an arthritic diathesis be present, alkalies, such as bicarbonate of sodium or Vichy water, should be used, or one of the mild purgative alkaline waters resorted to.

Should the urticaria be due to dyspepsia with constipation, the following prescription may be given :

R.—Benzonaphthol,
Powdered rhubarb,
Calcined magnesia, of each, gr. v.

Make into one cachet, and administer such a cachet half an hour before each meal.

Should diarrhœa be present, order :

R.—Betanaphthol,
Salicylate of bismuth,
Prepared chalk, of each, gr. v.

To be put into one cachet, which is to be taken after each meal.

Should nervous irritation be sufficient to prevent sleep, some mild hypnotic may be given—such, for example, as a small dose of opium, or sulphonal in the dose of 8 grains. Should the nervous irritation be very great, as much as 30 grains may be given in a day; or, in other cases, cachets containing as much as 4 grains of chloralose may be given four times a day. Often, too, bromide of potassium, in moderate dose, with extract of valerian, is useful. For the local treatment, lotions and powders are chiefly indicated. Baths are also useful. The patient is directed to take a bath of moderate temperature for a quarter of an hour. The bath contains one litre of vinegar, one litre of glycerin, and two drachms of corrosive sublimate. It should be taken in a porcelain or wooden tub. In relation to lotions there is much room for choice. Some recommend ether in the proportion of one-third, others vinegar one-third, or, again, Cologne water in the proportion of one-third, or the following prescription may be used as a lotion :

R.—Corrosive sublimate,
Chloride of ammonium, of each, gr. ii. ;
Aqua lauro cerasi, ℥iiss. ;
Distilled water, ℥viii.

Of the powders to be employed after the bath, we may use simple powdered starch, one-fourth of oxide of zinc, one-tenth of salicylate of bismuth, or one-fiftieth part of camphor. Of the salves, those which contain menthol or phenol are of most value, as, for example, the following prescription :

R.—Vaseline, ℥i. ;
Oxide of zinc, gr. xlv. to gr. lxxv. ;
Menthol or phenol, gr. v.

CHRONIC ULCER OF STOMACH.

R.—Chloroform ℥i.
Bismuth subnitrate . . . ℥iii.
Distilled water ℥xvi.

Sig.—Shake, and take one or two teaspoonfuls every hour.

FISSURE OF THE NIPPLES.

R.—Aristol ℥iss.
Liquid vaseline ℥i.

Sig.—Apply after each nursing.

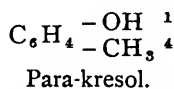
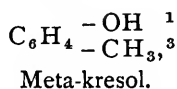
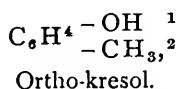
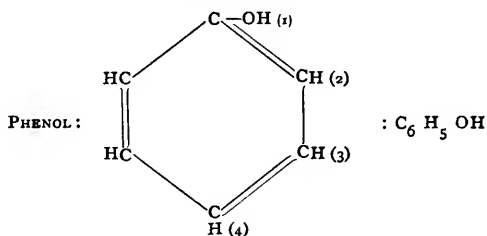
GONORRHOEAL OPHTHALMIA AND OPHTHALMIA NEONATORUM.

R.—Sulphate of quinine 2.
 Dilute muriatic acid75
 Distilled water 180.

Sig.—Shake well, and use as an eye-wash every hour.

TRIKRESOL : A NEW ANTISEPTIC.

Trikresol is a mixture of the three isomerides, ortho-, meta-, and para-kresol. They are homologues of phenol C_6H_5OH , and differ from it by having one atom of hydrogen replaced by the radical methyl CH_3 . The existence of the three isomeric compounds is explained by the different positions occupied by the methyl group in the benzene nucleus.



Trikresol forms an important constituent of a number of germicides—creolin, tysol, aseptol, etc.—which have, of late years, come extensively into use. However, it is only recently that a mixture of the kresols in the pure state has been obtained from coal tar. It is a clear, colorless liquid, soluble in water to the extent of about 1 in 40. It is, at least, three times more active than carbolic acid, and, moreover, is less poisonous, and does not numb the fingers and hands of the operator. One per cent. solutions of trikresol kills the pyogenic cocci in half a minute. The presence of albuminous substances do not materially retard its action. Finally, trikresol is cheap, which is an important factor to be considered with respect to an antiseptic.

OBSTETRICS

IN CHARGE OF

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SEPSIS PUERPERALIS. A CLINICAL AND BACTERIOLOGICAL CONTRIBUTION.

(Goldscheider, A., *Charité Annalen*, Band xviii.). The basis of this essay are sixty-eight cases of puerperal fever observed during the last three years. The cases are divided into the following classes, according to the classification of Kehrer:

- (1) Sapræmia (resorptive fever)—sixteen cases.
- (2) Peritonitis—twenty-one cases.
- (3) Pyæmia, thrombo-phlebitis, and mixed forms—twenty-four cases.
- (4) Septicæmia—three cases.

(1) *Sapræmia*. Under *sapræmia* is understood a febrile condition caused by the resorption of putrid masses from the cavum uteri. This fever subsides after thorough local antiseptic treatment. The author reports twelve cases (five confinements at term and seven abortions) without a death, and concludes that the prognosis of *sapræmia* is favorable, especially if a timely and energetic local therapy is carried out.

The fever shows peculiar characteristics. It is intermittent or markedly remittent; initial chills are the rule. The pulse is full and of moderate tension, in contrast to the small, rapid pulse of the septic forms of puerperal fever. Respiration is rapid—about sixty per minute. Herpes labialis is sometimes observed. Stinking lochia are the rule. Local symptoms are generally absent.

In the beginning *sapræmia* may resemble the gravest forms of puerperal fever. The results of the local treatment aid in making the differential diagnosis, and enable us to give a favorable prognosis.

Under the same heading he also reports four cases of temperature rise

due to infected lacerations of the perinæum. These did well under appropriate local treatment.

(2) *Peritonitis puerperalis* (eight abortions, twelve deliveries at term, all terminating fatally). When these patients first came under observation the tympanitis was moderate; it increased with approaching death. Exudations could only be demonstrated in four cases. Abdominal tenderness is characteristic of peritonitis; it may be absent if the sensorium is not free. Although vomiting is generally thought to be a constant symptom of peritonitis, it was not present in four cases. The pulse is small and frequent. The character of the fever is variable. The temperature ranged from 38.5° to 42° Celsius. In three cases the temperature was subfebrile; in these cases there was collapse.

The lochia were stinking in five cases. The fully described cases and accompanying post-mortem reports give no uniform picture.

(3) *Puerperal pyæmia, thrombo-phlebitis, septic-pyæmia*. The author groups these cases into nine subdivisions. In some cases there was thrombo-phlebitis and embolism; in others pus or pyogenic products were circulating in the blood. He also describes cases in which, besides the pyæmia, there existed a diphtheritic endometritis and diphtheritic puerperal abscesses.

The prognosis in these cases is undoubtedly better than in the septic form; out of twenty-four cases nine recoveries are noted. The differential diagnosis between pyæmia and septic peritonitis is only possible after prolonged 'observation. Repeated chills are characteristic of pyæmia. In septic peritonitis we have chills in the beginning of the disease. The character of the pulse is of great importance in the diagnosis and prognosis. In cases of pure pyæmia we find a fever pulse, full and bounding. Stinking lochia are less frequent in pyæmia than in septicæmia. Swelling of the spleen could not be demonstrated *intra vitam*. A purulent peritonitis is not of a pyæmic nature.

(4) *Septicæmia* (three cases—one abortion, death after four days; two deliveries at term, fatal after nine and seventeen days respectively). The varying picture of the disease is probably due to differing biological conditions and the malignancy and number of the invading streptococci. The malignancy of the streptococci is apparently not caused by any special virulence of the secreted poisonous substances, but is due to an enormous power of propagation. It is doubtful whether the streptococci acquire the malignant character only after they have invaded the system. More probably their greater development is aided by the presence of bacteria of putrefaction in the cavum uteri.

The therapeutic rules laid down are, in brief, the following:

Local therapy in sapræmia.

Avoidance of all and every local treatment in the peritoneal forms of puerperal fever, also in thrombo-phlebitis and pyæmia.

Intra-uterine irrigation in endometritis purulenta, without disturbing the patient much.

Abundant nourishment. . . The author has used the stomach tube with much success in the feeding of the patients. Alcohol. Absolute rest and sleep. Active stimulation. Tincture strophanthus in cardiac weakness. —*American Journal of the Medical Sciences.*

ASEPTIC MIDWIFERY WITHOUT INTERNAL DISINFECTION.

Mermann (*Centralbl. f. Gynak.*, No. 33, 1894) discusses aseptic as distinguished from antiseptic delivery. He brings forward statistics of 300 labors in the Mannheim Lying-in Hospital, from December, 1892, to February, 1894. In no case, not even before or after operative interference, were antiseptics introduced into the internal organs. Unless the labor was far advanced, each patient was examined internally. Not one mother was lost; one, it is true, had phthisis, and was transferred to a general hospital, where she died. In no case did any severe infectious disorder occur. Mer mann, adding the above to previous statistics, can show a series of 1,200 labors without one instance of fatal infection. Two deaths are included, but in one—the case of phthisis just noted—death was not due to the labor; the second was a case of rupture of the uterus. Mer mann shows that antiseptic midwifery cannot claim such favorable results.—*British Medical Journal.*

SUDDEN DEATH DURING LABOR.

Mrs. C., aged 25, had had two previous confinements, which were rapid and normal. There was a history of rheumatic fever when a girl. Cardiac disease (mitral stenosis) had resulted, but was not suspected till five months before her third confinement, when she suffered from acute bronchitis with hæmoptysis. There was some œdema at the latter end of pregnancy, and for a week before labor. She was kept in bed; there was then no bronchitis.

Labor began on April 1st. The os was well dilated when the membranes ruptured, and a fourth facial presentation was made out. Progress was slow and pains severe and rapid before the face and cranium swept over the perinæum, which remained intact. She rested some minutes after the expulsion of the child, and spoke about her labor being more severe and different from the others. Friction and gentle compression of the uterus was tried to expel the placenta; whilst doing so she began to cough, and suddenly threw back her head, gasping for breath, with wild,

staring eyes. She rapidly became unconscious, and died in about two minutes. The heart continued beating for about half a minute after the beginning of the attack. The placenta was hurriedly expelled, and ether and artificial respiration tried, but without avail. There was no post-partum hæmorrhage. No post-mortem examination was allowed.

This was probably a case of pulmonary embolism occluding the main trunk, the blood clot forming in the right ventricle or auricle during the pains of labor, and getting dislodged by the coughing.—James Dunlop, M.B., C.M., Glasgow, in *British Medical Journal*.

INDUCTION OF PREMATURE LABOR IN A CASE OF CONTRACTED PELVIS.

(Ballantyne, *Edin. Med. Jour.*, July, 1894.) The patient, æt. 42, pregnant for the eighth time, was 5 ft. 1½ in. in height, and had no apparent deformity. The abdominal enlargement suggested that full term had almost been reached. The obstetrical history showed gradually increasing difficulty in labors, beginning with the third and culminating with the seventh, in which the child had to be broken up.

Pelvic measurements: Interspinous diameter, 9 inches; intercrestal, 10 inches; external conjugate, rather over 7 inches; intertrochanteric, 12¼ inches; diagonal conjugate, 3 inches. The true conjugate was judged to be about 2½ inches, and all the other diameters were slightly less than normal.

The patient stated that she last menstruated in May, 1893, but there was a profuse discharge of blood on July 9th following. Quickening occurred in the beginning of November. Induction of premature labor was begun on February 15th, when it was calculated that the pregnancy was 220 days old. Pelzer's method of injecting two ounces of glycerine through the cervical canal into the lower uterine segment was employed four times on the 15th, but nothing resulted. Next day the cervix was dilated with Hegar's dilators up to No. 12, still without result; so, at 7 p.m., Champetier de Ribes' dilator was introduced well within the internal os. Uterine action began at 7.30. As the head would not engage in the brim, version was performed under anæsthesia. The lateral parts of the pelvis were found roomy, and no spinal deformity was felt. After much difficulty the child was born alive 6¾ hours after the introduction of de Ribes' bag, but it died seven hours later. Its bi-parietal diameter measured 3¼ inches; bi-temporal, 2¼ inches. The mother made a good recovery. Ballantyne is inclined to attribute the narrowing of the conjugate to an osseous or cartilaginous tumor growing forward from the first sacral or last lumbar vertebræ.—*Medical Chronicle*.

PUERPERAL INFECTION FROM THE INTESTINE.

Dumont (*Archives de Tocol. et de Gynéc.*, July, 1894), in a paper on "Puerperal Pseudo-Infection of Intestinal Origin, due to the Bacterium Coli Commune," says this form of infection arises from changes in the intestinal mucous membrane, inflamed through compression by the gravid uterus, or through retention of fæces irritating the coats of the bowel. These changes allow the bacterium coli to pass into the peritoneum, setting up infection, which is intestinal and not, strictly speaking, puerperal in origin. The symptoms usually appear about a week after delivery, the patient doing well at first, but being troubled with obstinate constipation. The temperature and pulse rise very high, the face looks pinched, the tongue is rough, the breath foetid. The mental condition remains normal, and even the appetite may be good. There is tenderness over the cæcum, transverse colon, and sigmoid flexure. Sometimes a flabby mass can be felt touching the uterus, but separable from that organ. The uterus and fornices feel free on palpation, as in many cases of true puerperal infection. The result is very uncertain. At least the course of the disease is different from that of enteric fever. In mild cases the symptoms disappear after the action of a purge; in other instances the patient dies within a fortnight; in others, again, she may remain ill for over six weeks, and yet recover. The usual sequelæ of infections have been known to follow, such as phlegmasia dolens, arthritis, ulcerative endocarditis, and salpingitis. An important complication, observed by two obstetricians, is paralysis, caused by central myelitis; this explains the great frequency of paralysis of the intestine, which involves further retention of the irritating scybala and greatly aggravates the disease. Dumont believes in the prophylactic treatment of this kind of infection. The bowels should not be allowed to become constipated during pregnancy. Laxatives and enemata during childbed are imperative from the first. Seven cases of intestinal infection are described.—*Epitome, British Medical Journal.*

THE TEMPERATURE AFTER DELIVERY IN RELATION TO THE DURATION OF LABOR.

Dr. Arthur E. Giles gave an analysis of 600 cases of normal labor from the point of view of the relation of the temperature immediately after delivery to the characters of the labor. The results were summarized as follows: (1) The average rise of temperature due to labor was slight, the average of the 600 cases being 98.7 F. (2) The length of the labor bore but a slight relation to the subsequent temperature. (3) The length of the second stage, however, had a direct influence on the temperature,

which rose in proportion to the length of this stage. (4) The time of day at which delivery took place had very little influence on the temperature, which, however, was highest in the groups of cases where delivery took place between 12 p.m. and 4 a.m., and between 4 p.m. and 8 p.m. (5) When chloroform was given during the second stage of labor the temperature was commonly lower immediately after delivery, even if the second stage lasted longer. The average temperature in fifteen cases with a second stage averaging two hours and forty minutes was 98.7. (6) A similar result followed the application of forceps under chloroform; in twenty-six cases with a second stage lasting on an average three and a half hours the average temperature was 98.8. (7) In twelve cases of natural delivery in which the second stage lasted on an average thirty-five minutes, but where an intra-uterine douche was given, the average temperature afterwards was 99.4 F.

PREGNANCY AND LABOR WITH BRIGHT'S DISEASE.

Dr. Herman presented to the London Obstetrical Society six more cases of pregnancy and labor with Bright's disease. He concludes there are at least two kinds of renal disease to which the pregnant woman is specially liable. One of these is a very acute disease, in which premonitory symptoms are either absent or of duration measurable by hours or days. It attacks chiefly primigravidæ. It often causes intra-uterine death of the child. It is attended with extreme diminution of the quantity of urine, and the small quantity of urine that is passed is greatly deficient in urea, but contains enough albumin to make it solid on boiling. This disease is accompanied with rapidly recurring fits. If it run a favorable course, the fits cease, then the urine increases in amount, and the percentage of urea in it rises. If the excretion of urea be not re-established, the case quickly ends fatally. Such cases seldom, if ever, pass into chronic Bright's disease.

The other is a disease which attacks older subjects, chiefly those who have had children before. Its premonitory symptoms extend over a period measurable by weeks or months. It often leads to intra-uterine death of the child. It is accompanied generally by increase in the quantity of urine, with copious loss of albumin, but not so much in proportion to the urine as in the more acute disease, and with diminution in the elimination of urea, but not nearly so great a diminution as in the more acute disease. Delivery is followed by temporarily increased diuresis and increase in the urea elimination. When this increase is considerable the albuminuria usually diminishes and disappears, and the patient gets well. When the increase is only slight the albuminuria persists, and the case becomes one

of chronic Bright's disease. This form of disease is sometimes attended with fits, but generally not. The presence of albuminuric retinitis affects the prognosis unfavorably. When the pressure within the abdomen is greater than usual the amount of urine may be diminished, but in such cases the diuresis and the augmentation of the urea elimination after delivery are proportionately greater.

In the acute disease which causes eclampsia, and in the chronic disease when it is associated with excessive intra-abdominal pressure, much of the albumin is paraglobulin. The cases in which the albumin is mainly serum-albumin generally either die or pass into chronic Bright's disease.—*Abstract from the American Gynecological and Obstetrical Journal, October, 1894.*

THE CARE OF PREGNANT WOMEN.

At the annual meeting of the American Association of Obstetricians and Gynecologists held in this city on September 19th, 20th, 21st, Dr. Dewees, of Salina, Kansas, read a paper entitled "The Care of Pregnant Women," a report of which appeared in our last issue, page 779. He concludes that civilization, with its fixed habits of excesses—through ignorance as well as carelessness—is the true source of woman's present suffering during gestation and childbearing. It follows, then, that the prevention of their sufferings lies in the education and training of these women so that they will cultivate the self-discipline requisite to enable them to prevent the continuous irritation from excesses in their habits of life.

The next great advance in our special branch of medical science will be through convincing the general practitioner that the diseases peculiar to women in pregnancy and parturition are largely preventable. When this obtains, his moral obligation will impel him to give adequate instructions concerning the ill-effects of improper posture, dress, food and drink, and erroneous habits of living, including the non-forbearance of indiscriminate excesses and impure sensual indulgences.

As yet we are compelled to meet the situation as we find it, and it becomes the duty of the obstetrician :

- (1) To discover if the patient be actually pregnant.
- (2) To determine positively whether the pregnancy be uterine and normal, or tubal, abdominal, and abnormal.
- (3) To carefully note the history, age, primiparity or multiparity, environments, station in life, general condition of health, period of gestation, dress, food, drink, habits of life ; to make repeated examinations of the urine, and to ascertain the temperature from the time pregnancy is established to the termination of gestation.

(4) To make a physical examination for the purpose of accurately determining the pelvic diameters ; the symmetry and size of the bony outlet ; the integrity, condition, and position of the vagina, uterus, and other intra-pelvic viscera and adjacent structures ; the state of abdominal muscles ; the presence or absence of hernia, varicose veins, tumors, etc. ; the shape, size, and condition of the breasts and nipples ; the condition of heart, lungs, mind, stomach, bowels, etc.

(5) To observe the state of the fœtus, its strength and viability, as well as the implantation of the placenta.

The thoughtful obstetrician will advise the patient as to the requisite régime. The consciousness of his full duty will impel him to insist upon :

(1) Absolute regular hours and wholesome environments.

(2) Plain, but nutritious diet.

(3) A proper amount of exercise by walking or light labor on foot, and maintaining the correct erect posture, with not less than ten hours' sleep out of every twenty-four.

(4) The open condition of the bowels and skin, which is to be chiefly maintained by proper diet, exercise, and bathing, the wearing of flannel, warm, low-heeled shoes and loose garments, and, in rare cases, the proper use of laxatives and hot water enemata.

Uranalysis and thermometry are very important from beginning to end of pregnancy. They are simple in detail, yet how prolific of averting the culmination of conditions very hazardous to mother and child—conditions which otherwise are frequently discerned only by the appearance of anasarca of the lower extremities, œdema of the face, or an eclamptic seizure. Dr. Dewees would replace the term "puerperal fever" by "parturial sepsis." He thinks the first misleading, and failing in the expression of the condition it is intended to imply. Parturial sepsis is a surgical sepsis, arising from the conditions in which women are found during the extension of the uterine contents, similar to those during surgical procedures. When the pelvis is abnormally distorted or contracted, pelvimetry furnishes the chief guidance. In the present light of science, premature delivery and embryoclasia have no place in the obstetric art in connection with a viable fœtus. We are thus left to choose between two procedures whenever we find the pelvis so distorted or contracted that it precludes all probability of delivering the living child, namely, symphysiotomy and Cæsarian section. At term symphysiotomy is available only in cases where the conjugat measures are sixty-seven millimetres, while if the conjugat is found to be sixty-seven millimetres or under the only recourse is Cæsarian section.

The distinction of the embryo is, however, requisite under certain circumstances or conditions, such as the presence of large fibroids in the body of the uterus, or large tumors involving both the ovary and uterus, also cancer of the uterus, and, in certain cases, placenta prævia.

In the discussion which followed, Dr. J. Henry Carstens, of Detroit ; Dr. Joseph Hoffman, of Philadelphia ; Dr. H. W. Longyear, of Detroit ; Dr. C. A. L. Reed, of Cincinnati ; Dr. Duff, of Pittsburg ; Dr. Joseph Price, of Philadelphia ; Dr. W. B. Jones, of Rochester ; and Dr. E. W. Cushing, of Boston, took part.

Regarding the subject of albuminuria of pregnancy, Dr. Longyear said he knew of nothing that would do much good except emptying the uterus. The more he had seen of the fatal results of albuminuria of pregnancy, the more he had been convinced that the only safety to the mother is to deliver her just as soon as he found albuminuria present. He believed it to be justifiable practice if, after repeated examinations of the woman, he found the system to be surcharged with urea to deliver. He would say that the majority of deaths he had seen from albuminuria incidental to labor had not been attended with eclampsia, and that women oftener die from uræmic poisoning without convulsions.

Dr. Reed said that if it be true that the condition were not a remediable one, then the position which Dr. Longyear assumed would be tenable. But these cases are curable, and he could see no reason for entering upon a murderous line of tactics simply because the baby was little.

When the fact has been demonstrated that the case is not curable, then the proposition relative to the induction of premature labor could be taken into consideration, but the idea that delivery should be brought about the moment the diagnosis of albuminuria had been made is one he could not permit to go without a challenge.

Dr. Duff said, in reference to the question of albuminuria, that he regretted to hear Dr. Longyear say that we should bring on labor whenever albuminuria was detected. About twenty per cent. of pregnant women have more or less albuminuria, and there are not more than two per cent. of pregnant women with albuminuria who have eclampsia. He thought it seldom, indeed, that death occurred from albuminuria of pregnancy without eclampsia. It had not been discovered how the different poisons were eliminated from the kidneys, and it had not been positively demonstrated that it is albuminuria *per se*, or uræmic poisoning, that kills women.

SURGERY

IN CHARGE OF

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CHOLECYST-DUODENOSTOMY AND GASTRO-ENTEROSTOMIES BY AID OF MURPHY'S BUTTON.

While operations on the gall-bladder have been performed as long ago as in the middle of last century, it is first during the last ten or fifteen years that improved methods have been devised, by aid of which a moderately favorable prognosis could be obtained.

We owe this progress, as to many other advances in surgery, to American surgeons; in this case to Dr. John B. Murphy, of Chicago, whose anastomosis button, by its simplicity and mechanical perfection, and the ease and celerity with which it may be applied, seems to fulfil all indications for a safe and reliable removal of gallstones from the gall-bladder itself.

The question arises, When ought we to operate in cases of jaundice? It is impossible to give a distinct diagnosis in each case. Jaundice may be the result of gallstone impaction in the common duct, or of cancer of the pancreas or liver, involving the duct, or simply of a gastro-duodenal catarrh. In many cases, of course, the symptoms will be sufficiently prominent to give a differential diagnosis; in others the diagnosis will be obscure, unless we open the abdomen.

I need scarcely mention that an impacted gallstone, if sufficiently large, in the common duct gives jaundice, and, secondarily, swelling of the gall-bladder, while an impaction in the cystic duct is not followed by jaundice, and may not be followed by swelling of the gall-bladder, unless cholecystitis supervenes. On the other hand, swelling of the gall-bladder, with or without jaundice, may be the result of a carcinoma of the gall-bladder itself, or neoplasms in the pancreas and liver, involving the common duct, or of an empyema, the result of cholecystitis with or without gallstones.

When ought we, therefore, to discard medical treatment, and have recourse to the only means which can clear up the diagnosis—laparotomy?

I believe that jaundice ought to be treated by laparotomy after a course of medical treatment of several weeks has demonstrated the improbability of relieving the trouble by this means.

The abdomen having been opened by a vertical incision at the outer edge of the rectus muscle, we may examine the gall-bladder for stones in the common, cystic, or hepatic ducts, and if found, particularly in the gall-bladder, remove them with scarcely any danger to the patient. If carcinoma of the gall-bladder should be found, it is entirely feasible to remove the gall-bladder by cholecystectomy. If the common duct should be found obstructed by a neoplasm, we may, at least, relieve the jaundice by a cholecystenterostomy, with any more danger to the patient than accompanies an explorative antiseptic laparotomy, and that is *nihil*.

The older operations for gallstones consisted in: (1) Suture of the gall-bladder to the parietal peritoneum with secondary incision, *i.e.*, cholecystotomy in two sittings; (2) suture with immediate incision, *i.e.*, cholecystotomy in one sitting; (3) incision of gall-bladder followed by immediate suture and reposition in abdominal cavity, *i.e.*, ideal cholecystotomy. Of these three operations, the first has given the most favorable results, the mortality being ten per cent., six deaths in fifty-nine cases.

The second operation has given a mortality of 19 per cent. in 201 cases, but both the first and second operations have the great disadvantage that a biliary fistula is left in a large number of cases, estimated at 31 per cent., so that perfect recovery has only been obtained by these operations in about 50 per cent. The third operation, ideal cholecystotomy, has given a mortality of 23 per cent. Compare the results of these operations with the most modern operation, scarcely as yet known to physicians, cholecystenterostomy, or cholecyst-duodenostomy, by aid of Murphy's button, with a mortality of *nihil* and a complete recovery of 100 per cent. in seventeen cases, or, if I add one of my own, eighteen cases, and you will probably agree with me that the problem of removing gallstones by operation has been most ably and brilliantly solved by this new device.

The operation is performed in the following way: After the abdomen has been opened and the gall-bladder isolated and drawn out of the wound, a running thread is inserted around a line one-third longer than the incision to be made, and going through all the layers of the organ. The incision is thereafter made and the gallstones removed. It is not necessary to remove all the gallstones, as they will pass away after the button has been passed. One-half of the button is now inserted with a forceps and the running thread tied around the cup. A similar thread and incision is

made in the duodenum, opposite the mesentery and below the head of the pancreas, the button inserted and the two halves firmly pressed together. The spring in one of the cups maintains pressure till the button sloughs off, and it is voided by rectum in from seven to twenty or twenty-five days. The gall-bladder shrinks thereafter, forming a canal of the size of the common duct. This operation is, according to Murphy, indicated : (1) In all cases in which it is desired to drain the gall-bladder ; (2) in all cases of cholelithiasis with obstruction of the common duct ; (3) in all cases of cholecystitis, with or without gallstones ; (4) in all profusely discharging biliary fistulas. It is contraindicated : (1) When the gall-bladder is too small for insertion of the button ; (2) where adhesions are so extensive that the bladder and duodenum cannot be approximated ; (3) where the ductus cysticus is obliterated, in which cases cholecystectomy is indicated.

When a stone is impacted in the common duct, attempts have occasionally been made of removing it either by crushing it through the walls with instruments protected by a rubber covering, or by dividing it by a needle introduced through the wall, or, lastly, by incising the duct, removing the stone, and closing the wound by suture. This last operation is very difficult, on account of the deep position of the duct, and the mortality is about 40 per cent.

The Murphy button may be used to advantage on other organs than the gall-bladder. In a recent case, operated seven weeks ago, I made an anastomosis between the stomach and the duodenum, on account of cancerous stricture of the pylorus. The case was entirely successful, all vomiting stopped, and the patient left the hospital in three weeks greatly improved, able to eat and retain his food. His life will, probably, be lengthened a good many months by this operation. In another case of cancer of the pylorus, in which the patient was extremely exhausted from starvation from vomiting, death occurred twelve hours after the operation. The operation was performed in less than fifteen minutes, and she died simply from exhaustion. In a third case of cancer of pylorus, in which the patient was in a state of extreme inanition, I made a gastro-duodenostomy a few weeks ago, using the smallest of Murphy's buttons, as the others of my set were all in use. For seven days everything went well, vomiting had ceased, and the patient was improving and feeling well, when she suddenly complained of severe burning pain in the abdomen, as if "melted lead was being poured down among the bowels." She collapsed and died in two hours. The post-mortem showed that the button had slipped out of the stomach, leaving a large opening, through which the contents had entered the abdominal cavity. The small diameter of the button necessarily allowed only a small brim of the hypertrophied wall of the stomach to be compressed between the cups, and the accident occurred

partly on this account, partly from muscular contractions of the stomach. I consider it of the utmost importance to publish this case, and shall, in all future gastro-enterostomies, use a running suture around the button as a means of safety. I do not believe it would have occurred in a cholecyst-enterostomy, where the muscular force, probably, is lacking.—Herman Mynter, M.D., in the *Buffalo Medical and Surgical Journal*.

FEEDING OF INTUBATED CHILDREN.

Paine (*Albany Medical Annals*) refers to the paroxysms of choking and coughing liable to be excited by efforts at swallowing, the danger of the expulsion of a tube when no one is at hand able to replace it, the discomfort of getting fluids into the air passages, and the deterioration of vital force and blood from lack of nourishing food. He has resorted to feeding through the nose by a stomach tube; the nares and fauces are first sprayed with a two per cent. solution of cocaine, and a new soft rubber catheter (No. 6 or smaller) is well oiled and slowly and carefully passed through the least obstructed nostril.

A rapid movement will carry it below the highly reflex area of the larynx, and the remainder can be introduced slowly. The No. 6 catheter will not enter any of the O'Dwyer tubes, except possibly the largest. The entrance of a small tube into the larynx will be immediately revealed by the current of air forced through it, while in the œsophagus it will excite the act of swallowing. It should be introduced thirteen or fourteen inches and the desired nutriment slowly passed into the stomach by a fountain syringe or simple catheter and funnel, after which the tube can be slowly withdrawn. This procedure offers the advantages of the easy introduction at regular intervals of sufficient concentrated nutriment, stimulants, and medicines, the removal of aggravated thirst, and ability to feed the patient while in any position. —*Philadelphia Polyclinic*.

PÆDIATRICS AND ORTHOPÆDICS

IN CHARGE OF

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METHYLENE BLUE IN NOMA.

G. F. Kostuerin (*Vratch*, No. 32, 1894, p. 893) relates two cases of noma, in which, after all the usual measures (actual cautery, perchloride of iron, thymol, iodoform, etc.) had failed, he resorted to hourly painting the parts with a twenty-five or thirty per cent. aqueous solution of methylene blue. In a few hours foetor disappeared and sloughs began to fall off, while, later on, cicatrization set in. One of the patients ultimately died from exhaustion, but the other recovered.

GASTROTOMY FOR THE REMOVAL OF FOREIGN BODIES.

In the *British Medical Journal*, November 3rd, 1894, Mr. Mayo Robson gave an account of a case in which he had successfully removed, by gastrotomy, the following articles: 47 cast-iron garden nails, $1\frac{5}{8}$ inch long; 93 brass and tin tacks, $\frac{1}{2}$ inch to 1 inch long; 12 large nails, some brass-headed; 3 collar studs; 1 safety pin; 1 sewing needle. They had been swallowed by a child aged 10, during the course of the previous eight months. The wound healed by first intention, and the patient made a complete recovery. The symptoms were obscure until a clue was obtained by the vomiting of a nail. Mr. Robson dwelt on the marked effect of transfusion of saline solution in combating shock.

ADENOID GROWTHS IN THE DOME OF THE NASO-PHARYNGEAL SPACE.

Ray J. Morrison, Louisville, Kentucky (*Med. and Surg. Rep.*, Phila., 1894, lxx., 74), summarizes as follows:

(1) The majority of cases of chronic nasal obstruction in children are due to the presence of adenoids in the naso-pharynx.

(2) Mouth breathing, snoring, wakefulness, defective mental development, bad teeth, deformed chests, and deafness result from this obstruction.

(3) The recurring earaches and pus discharges from the ear, persistently resisting treatment directed to the ear, are the result of the presence of adenoids, and, in a majority, prompt relief follows surgical removal of the growths.

(4) Many of the ear diseases of adults and so-called post-nasal catarrhs are the result of adenoids that had not been recognized or treated in early life.

(5) That, while adenoids will apparently disappear as adolescence is attained, they never entirely atrophy, but leave fibrous stumps and adhesions to the Eustachian tube.

(6) Operation for their removal should be undertaken under an anæsthetic, and thorough removal accomplished.

(7) The operation is reasonably safe, and, besides giving decided relief to the local symptoms in the throat and ear often shows wonderful improvement in the general physical condition.

ANTITOXIN TREATMENT OF DIPHTHERIA.

In the last number of *The British Medical Journal* (November 3rd, 1894), three cases of diphtheria are reported in full, in which injections of Aronson's antitoxin serum were used.

CASE 1. *Æt.* 11 years. Taken ill Oct. 19th. Next day tonsils and uvula covered with membrane; from portions of this cultures of Klebs-Loeffler bacillus were obtained. Oct 21st: 19.5 c.c. injected. That evening temperature fell to normal. This was followed by rapid detachment of the membrane and reduction of glandular enlargement, which had previously been marked. Oct. 23rd: Tonsils and palate almost free from membrane.

CASE 2 (Dr. Fowler). *Æt.* 13 years. Began to feel ill on Oct. 12th. Admitted to hospital Oct. 14th. Right tonsil covered with thick membrane, while over left was a thin film. Slight glandular swelling. Temperature, 102.5°; pulse, 100; respiration normal; 2 c.c. Aronson's antitoxin serum injected into left arm. A chlorine mixture to be sprayed on throat every two hours. At 10 p.m. temperature was 102°; at 6 a.m. it was 99.4°, and, on the evening of the 16th, 98.8°. The membrane had not increased, and patient felt better. Oct. 17th: Morning, temperature, 99°; pulse, 56; tongue moist; left tonsil clean; and membrane on right

was separating. Oct. 18th: Temperature normal. Improvement. Oct. 19th: Throat quite clean. Albumin in urine.

CASE 3 (Dr. Makeling). *Æt.* 6½ years. Taken ill first on Oct. 1st. Had headache and chills. Oct 6th: Throat became sore. There was earache, with slight offensive discharge from the ears. First seen Oct. 7th. Membrane on both tonsils, uvula, and palate. Glands at angles of jaws swollen and painful. Temperature, 100.6°; pulse, 130. Urine scanty and highly albuminous. Mixture of tr. ferri mur., quin. sulph., and pot. chlor. given, and throat sprayed with carbolic acid (1 in 60). Oct. 8th: No improvement. Pulse, 132; temperature, 102°. Marked whistling stridor and falling of intercostal spaces. 5 c.c. Aronson's antitoxin serum injected. One and a half (12.30) hours after injection, temperature 99°; no change in pulse. At 1 p.m. child expectorated large piece of membrane. At 2.30 pulse 120, stronger; temperature, 98.8°. Second injection of 3 c.c. antitoxin given. Oct. 10th: Temperature, 97.8°; pulse, 108. Improvement continued. Large quantity of membrane expectorated during afternoon. Oct. 11th: Child still improved during early part of the day, but breathing became difficult, and tracheotomy was done. This gave marked relief, but after a time the pulse began to fail. Green, foul-smelling stools were voided. Child died at 11 p.m.

PLEURITIS WITH PURULENT EFFUSION CURED BY ASPIRATION.

A case of pleuritic effusion cured by aspiration is related by James Carmical (*Edinburgh Medical Journal*, September, 1894). The patient, a little girl of one year and nine months, had been ill for five weeks before admission with slight cough, and was becoming feeble and anæmic. Physical signs of effusion on right side. The pleura was aspirated and twelve ounces of pus removed. Two days afterwards aspiration was again done, and three ounces of pus withdrawn. Five days later the process was repeated, and four ounces removed. Again, three days later, three ounces were removed. It was now decided to drain, but, on incision, no pus escaped, and the wound was at once closed, and healing by first intention insured. Five days after incision aspiration was again tried, this time bringing two and one-half ounces of pus. No further aspirations required, the child making a complete recovery. Discharged well two months after admission. In all, five aspirations were done. Six months after leaving the hospital no difference could be detected in the physical signs on the two sides of the chest.

PATHOLOGY

IN CHARGE OF

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THE HISTOLOGY OF CHRONIC GASTRITIS.

(Ubrik. Quensel, *Nordiskt Medicinskt Arkiv*, xxv. 5, Mèmotre, pp. 24-34.) In the first part of his thesis the author takes up the atrophy of the gastric mucosa. He examined the stomachs of three cases of pernicious (progressive) anæmia. The first was that of a man of thirty-seven years who had suffered since his eighteenth year from a progressive gastric catarrh. Six months before death he developed all the signs of pernicious anæmia. On examining the gastric juice, neither hydrochloric acid, pepsin, nor rennet was found, but a small quantity of lactic acid. At the autopsy the following modifications were found: Ecchymoses of the skin and endocardium, fatty degeneration of the myocardium, lobular pneumonia, follicular enteritis, bone marrow red and embryonic. The stomach wall was of the usual thickness, the mucosa pale; a few polypi were found at the cardiac end. The second case was that of a man thirty-two years of age, who, four years before his death, had commenced to suffer from acid and glairy regurgitations, and sometimes vomiting; six months later symptoms of pernicious anæmia came on. These symptoms improved after some time in the hospital, but again became worse, and finally brought on death. The examination of the gastric juice showed the presence of lactic acid, but the absence of hydrochloric acid, pepsin, or rennet. At the autopsy the following conditions were found: Anasarca, ascites, ecchymoses of the skin and peritoneum, follicular enteritis, marrow red and embryonic, the gastric mucosa very much thinned in all the cardiac region, and particularly in the middle third of the organ. The third case was that of a man fifty-eight years of age, who had, during six months, become quite pale and weak. On entering the hospital, it was diagnosed

pernicious anæmia. At the autopsy were found ecchymoses of the skin and pleural pulmonary œdema, fatty degeneration of the myocardium, no change in the marrow; in the stomach the submucous tissue was thickly œdematous, the mucosa was covered with a thick, pale, tenacious mucus. On microscopic examination, M. Quensel found in the three cases a very much advanced interstitial gastritis, with much atrophy of the glands. These changes were found almost entirely in the cardiac end, only very slight alterations being found at the pyloric. After a review of the work already done on this subject, the author goes on to the question of the bearing of these changes as an etiological factor in pernicious anæmia. He does not think that the stomach change can be the only cause of this blood disease. At the same time he does not but admit that progressive pernicious anæmia and gastric atrophy usually go hand in hand; so far nothing more definite can be said. In the second part of his thesis M. Quensel gives a résumé of the histological changes in chronic gastritis. He bases his observations on the three cases above mentioned, and on nineteen others, a more detailed account of which he gives in the third part of his paper. In reference to the etiology of these cases, gastritis in four cases accompanied cancer of the stomach; in five, pulmonary tuberculosis; in one, pseudoleucæmia; in one, organic heart disease; in two, chronic nephritis; in three, alcoholics; in one, senile (man eighty-five years old). In spite of the different etiologic factors the author has found that in all the cases the changes were of the same nature, with the one exception that they were in different stages of development. The author contends that a histological division of chronic gastritis should be made into interstitial and parenchymatous chronic gastritis. M. Quensel did not have at his disposal material illustrative of this last division, and trusts to the literature on the subject. In this paper he adheres particularly to the interstitial form.

The author has shown that the neoformation of connective tissue, which constitutes the chief alteration and the essential one, commences always at the inner surface of the mucous membrane, whence it gradually spreads more deeply, thus forming a type to which he gives the name descending interstitial gastritis. As the neoformation of connective tissue goes on the glands disappear more and more, until finally there is a complete atrophy of the gastric mucosa. In the early stages of the process the author has not been able to make out any change in the epithelial cells. In the more advanced stage, he has often found a granular degeneration of the chief cells, but has never found any in which there was fatty degeneration. The border cells were made out in nearly every case, even when hydrochloric acid was absent clinically. In two cases only, when the gastric juice was shown to be free of hydrochloric acid, were these cells

absent, but their disappearance may have been correlative to cadaveric changes, which could not be excluded in these two cases. M. Quensel specially mentions a case where all the glands of the cardiac region were of the simple tube form, lined even to the bottom of the glands with cells resembling the surface epithelium. Quite a number of these cells showed mucous degeneration.

The author has found in a certain number of other cases the same changes in the glands in circumscribed spots, as well at the pyloric as at the cardiac end of the stomach. He also mentions a diffuse fibrosis of the stomach in a woman aged thirty-seven years. The submucosa was considerably thickened with sarcomatoid tissue. The mucosa, on the contrary, showed no considerable changes, and from this he has been led to admit the probability that the process might start in the submucosa. M. Quensel makes an exhaustive observation on certain homogeneous concretions formerly observed in chronic gastritis by Sachi and various other authors. They are from 4 to 30 *m* in diameter, and he has been able to observe how the large ones are formed from a fusion of smaller ones. The number varies in each case; sometimes they are very numerous, and are found chiefly in the superficial parts of the mucosa. They are always situated in the connective-tissue spaces, and not in the blood vessels. In the unstained state they are yellowish, and slightly glistening; they are deeply colored with cosin, acid fuchsin, and prussic acid. Weigert's method of staining fibrin has a specific reaction on these. Concerning the histogenesis, M. Quensel attributes their origin to the hyaline degeneration of the red blood corpuscles; a degeneration which does not take place in the blood vessels, but only when the red corpuscles, after diapedesis or rupture of a vessel along with an inflammatory process, have gotten out of the blood vessels into the lymph spaces. Hyaline transformation of the red blood corpuscles is much more common in chronic gastritis than is pigmentary transformation, which M. Quensel has, only on two occasions, and then in an insignificant degree, been able to observe.—*Rev. Internat. de Bibliog. Méd.*

THE INFLUENCE OF BLEEDING ON THE ABSORPTION AND TOXICITY OF DRUGS.

(F. A. Fodera, *Archivio di farmacol. e Terapeut.*, 1894.) Bleeding, as Magendie, hastens absorption very much, and diminishes the resistance of the organism to poisons, at least to nerve poisons (strychnine), which is easily explained. Anæmia, whatever be its cause, renders the central and peripheral nervous system more excitable.—*Rev. Internat. de Bibliog. Méd.*

THREE SPECIMENS OF CARDIAC TUMORS.

(Ludvig Hektoen, *Medical News*, 1893.) Neoplasms of the heart are amongst the rarest ; there are actually only 110 or thereabout on record. These three cases are particularly interesting. The first was in a woman fifty years of age, suffering from uterine cancer. The autopsy revealed a cancerous nodule in the wall of the right ventricle. The second was in a boy of twelve years, having an osteo-sarcoma of the tibia, for which disarticulation at the knee had been done, and afterwards the same at the hip. After death a large sarcomatous nodule, nearly filling the right ventricle, was found. The third was in an Indian woman of about fifty years of age. There were no clinical observations. At the post-mortem examination a primary, small round cell sarcoma was found in the heart.—*Rev. Internat. de Bibliog. Méd.*

ON THE PATHOLOGY OF INFECTION IN THE EMBRYO.

(Pr. Maffuca, *Il. Policlinico*, Jan. 15, 1894.) The author has endeavored, not so much to observe how infection takes place in the embryo, as to how the infected embryonic tissue itself reacted. With this object he has studied the action of anthrax, hen cholera, Friedlander's pneumococcus of aviary and human tuberculosis, and of their toxic properties on the embryo chick, and on the embryos of rabbits. The following are some of the general conclusions he has come to from these researches: The living embryo does not allow of the growth of pathogenic microbes in its tissues, except under very exceptional conditions; it is capable of destroying, attenuating, or storing them up to allow of their growth after the embryo has escaped from the egg. Some microbes, non-pathogenic for the adult chicken, are pathogenic for the embryo. This one conclusion refers more to the chick than to the rabbit fœtus. These conclusions are drawn from observations made on nearly one thousand embryo-chicks and one hundred and fifty rabbit fœtuses. The author proposes to follow out these researches.—*Rev. Intern. de Bibliog. Méd.*

HYGIENE AND PUBLIC HEALTH

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COMPULSORY VACCINATION.

Dr. W. E. Quine, of Chicago, before the Illinois State Medical Society, said that vaccination was introduced to the attention of the medical profession by Edward Jenner, in 1798, as the result of investigations which extended over a period of twenty years. During the century preceding, according to the estimates of our most authoritative writers and statisticians, smallpox, "the most terrible of all the ministers of death," destroyed in Europe alone 50,000,000 human lives. Think of it! Five hundred thousand deaths every year from the most loathsome pestilence known to man; thirteen hundred deaths every day, nearly a death every minute for a hundred years. If it be true, as is believed by enlightened people, that universal vaccination and revaccination, efficiently done, will put an end to all this desolation and horror from epidemics of smallpox, and finally eradicate the disease altogether, it would appear that the discoverer of vaccination is the greatest benefactor that mankind has known. Alexander was great. Cæsar was great. Hannibal was great. Napoleon was great. They were all great—as destroyers. What have they done? What have all the kings and potentates and warriors of earth done, in comparison with one member of the medical profession in the direction of adding to the sum total of human happiness and human life? Are such conceptions of the possibilities of vaccination an idle dream?

As proof of the protective influence of vaccination, many examples were cited by the speaker, and but one will suffice here: A village in Leicestershire of thirteen hundred inhabitants was visited in 1872 with smallpox. All but two of the inhabitants were vaccinated, and they escaped the disease. The two unvaccinated persons contracted the disease and died of it.

Age for vaccination. Children are more liable to smallpox than adults, and more liable to die when attacked. The younger the child, the greater the danger ; hence vaccinate during the first year of life.—*The Journal of the American Medical Association.*

NATIONAL LIVE STOCK SANITARY ASSOCIATION.

A National Live Stock Sanitary Association has been recently organized in Washington, D.C. In view of the prominence which has recently been given to diseases of live stock in Canada, the establishment of such an association would obviously be of great benefit to the financial and sanitary interests of this country.

THE VALLEY OF MEXICO.

The drainage of the valley of Mexico has been undertaken again. The estimated cost is \$3,500,000. The contract was made by the authorities of the city of Mexico on June 4th. The work is to be finished by May 1st, 1896.

INSOMNIA.

It is pointed out by Mr. Huxley that nature's plan for curing insomnia is to limit the supply of oxygen to the blood, as the cat and dog bury their noses in some soft hollow in their hair or fur ; birds put their heads under their wings and soon fall asleep. Mr. Huxley suggests that those suffering from insomnia should cover their heads with the bedclothes and breathe and rebreathe only the respired air ; when drowsiness is produced it is easy to go on sleeping, and the bed coverings can be pushed aside and as much fresh air obtained as is needed.—*American Practitioner and News.*

INSANE ASYLUMS THAT ARE SIMPLY PRISONS.

The address of Dr. S. Weir Mitchell before the American Medico-Psychological Association in Philadelphia was in the nature of a broadside aimed at the management of insane asylums in this country. The doctor finds little in the present system to commend. In the appointment of asylum superintendents, physicians, and nurses, nothing is as influential as a political pull. Asylums are simply prisons, and not hospitals conducted in an intelligent and scientific manner. They are not provided with modern medical advantages, such as masseurs, an electrical room, and hydro-therapeutic treatment. The nurses are not properly educated and examined. A far better system than the huge asylum would be separate small houses, with caretakers and appliances for work and recreation. The insane

should have work, when able to perform it, and they would prefer it to listless idleness. If the object of the insane asylum is to restore the patient to usefulness in society, the present methods of procedure, according to Dr. Mitchell, are deserving of nothing but denunciation. As the address was delivered in the presence of many asylum superintendents, it is likely to be productive of some pretty vigorous thinking, at all events.—*Pacific Record*.

A SEWERAGE SYSTEM FOR NEW ORLEANS.

The Crescent City is to be congratulated upon the prospect of having constructed in the near future a complete and extensive sewerage system. If there is a spot on earth that needs sewers worse than New Orleans, the *Texas Sanitarian* has forgotten its geographical whereabouts. Twenty-eight deaths to every thousand inhabitants is a sufficient basis for the indictment and trial for manslaughter of every administration since the days of Ben. Butler.—*Texas Sanitarian*.

THE SANITARY INSTITUTE.

The fourteenth congress and exhibition of the Sanitary Institute was held in Liverpool, commencing September 24th. The Lady Mayoress of Liverpool presided in the conference on "Domestic Hygiene." The various sections were: I. Sanitary Science and Preventive Medicine, under the presidency of Dr. Klein. II. Engineering and Architecture. III. Chemistry, Meteorology, and Geology.

MORTALITY OF TUBERCULOSIS.

Dr. Lagneau said that his investigation into the relationship existing between occupations and the development of tuberculosis showed that the greatest number of deaths from phthisis occurred in workers exposed to irritating substances in the respired air. In Switzerland 10 out of 100 stone-cutters die from phthisis. In England, of 1,000 deaths occurring in these workers, 340 were from phthisis. Tuberculosis makes cruel onslaught likewise in those individuals who habitually occupy a bent posture at their occupations, and in those who live sedentary and intellectual lives. Of 1,000 deaths in Italy among students and seminarians, 450 died of phthisis—that is, nearly one-half. In England, of a similar number of deaths in printers, 430 died of phthisis.

On the other hand, statistics show that it is quite exceptional for this disease to be the cause of death of those who live in open air. In Switzerland, of 1,000 deaths occurring in outdoor laborers and farmers, not more than one or two die from phthisis. A similar number of deaths in

Italy among shepherds and farmers shows only from forty-four to fifty-five deaths.

In France the sanitary statistics gathered from 665 towns show that the more the population is conglomerated, so in proportion are the inhabitants gravely infected with tuberculosis.—*Medical Record*.

A STATISTICAL STUDY OF SMALLPOX.

Welch, in a paper read before the Pan-American Medical Congress, has placed upon record the statistics of 5,000 cases of smallpox that have been under his care at the Municipal Hospital for infectious diseases in Philadelphia. Of these 2,831 were cases of unmodified variola, of which 54.18 per cent. died; and 2,169 of varioloid, modified by vaccination, of which 1.29 per cent. died. Nearly two-thirds of the cases were males, the death rate being about the same for both sexes.

Nearly one-sixth of the patients were of negro blood, and among these the proportion of deaths was larger than among the whites. But Welch points out that the proportion of the unvaccinated was correspondingly larger among patients of negro blood, and that comparing the unvaccinated of both races the mortality was almost exactly the same, viz., 58.5 for white and 58.54 for black.

The statistics but feebly indicate the value of vaccination, however, since they give no sign of the disfigurement of the unvaccinated who recovered and the comparative freedom from scars of those who had been vaccinated.

On admission, the presence and character (as good, fair, or poor) of vaccination scars was noted in each case, and the subsequent course of the disease seems to indicate that the quality of the marks has more significance, as indicating protection, than their number, although this also seemed to have some influence.

With reference to vaccination after exposure and prior to the appearance of the eruption, it was found that of seventy-four cases vaccinated longer than seven days before the appearance of the eruption but fifteen died.

As to revaccination, his experience leads him to place implicit confidence in its efficacy. The proportion of deaths among the vaccinated increases with the length of time that has elapsed; after fourteen years the deaths being about 9 per cent. of those who showed a good mark. After revaccination, death occurred in a smaller proportion of cases than after a previous attack of smallpox, and not at all in those who showed good scars.

As to second attacks, he has never seen an unmodified or severe case of smallpox in a person who was deeply and characteristically pitted from a previous attack, and during a service of over twenty years no person was admitted a second time for any form of the disease.—*Philadelphia Polyclinic*.

DENTAL EXAMINATIONS OF SCHOOL CHILDREN.

The Berlin Society of Dentists has written to the magistrates of Berlin, proposing to establish dental examinations of school children at regular intervals, a sanitary measure which is already in practice in many schools of England and France, as well as in the Prussian Military College.—*Popular Health Magazine*.

VACCINATION.

Before the introduction of vaccination, the mortality in Austria from smallpox was 62 per 100,000; in Prussia, 49. Since the introduction of vaccination the mortality has been two cases in 700,000. In Germany, where revaccination is compulsory, the death rate is one patient in every 1,200,000.

CHILDREN OF TUBERCULAR PARENTS.

The hygienic treatment of children born of tuberculous parents should begin at birth. If the mother is tuberculous she must not nurse the child. If possible, the child should be brought up in the country, or better still, if practicable, near the sea, or at least make long stays in the country, as the dangers of contagion are less frequent there than in the cities. Any sign of feebleness, such as rickets, anæmia, enlarged glands, etc., should receive due attention. Diseases of the respiratory tract, should be most carefully attended to, as they may directly prepare the soil preferred by the tuberculous germ.—*Popular Health Magazine*.

Editorials.

ELECTION PROTEST.

WE understand that a protest has been entered against the election of Dr. Spankie, of Wolfe Island, in Division 15. After a very exciting election, the votes were counted by the returning officer, Dr. A. S. Oliver, in the presence of scrutineers representing the candidates. The result was declared a tie, and Dr. Oliver gave his casting vote in favor of Dr. Spankie. The scrutineer of his opponent, Dr. Dickson, of Pembroke, had objected to several of the votes recorded for Dr. Spankie, on the ground that they were tendered by proxy. In former times such protests were settled by the council. It will be remembered that, after the election in 1889, Dr. Shaw, of Hamilton, was unseated by the council at the following session, and Dr. Miller was declared the representative of the division. Other cases of a similar kind had occurred before that time, and sometimes a considerable amount of ill-feeling was aroused. Such trials by the whole body of the council became so unsatisfactory in various respects that a change was thought desirable by many, including a majority of the members of the council. The recent amendments to the Medical Act provided that in future any such election trial shall be held by a county judge. In this instance the protest will be tried by His Honor Judge Price.

METHODS OF WARFARE.

IF any one cognizant of events were to ask, in all seriousness, whether the recent council elections were conducted in accordance with methods that reflected credit on a body of educated gentlemen, he would probably be regarded as a very innocent simpleton, who scarcely deserved a reply; or he might possibly be told that there was no tangible evidence of the existence of any very large number of educated gentlemen among the medical profession of Ontario. The contest between the "Old

Guard" in the council and the "Defence Association" has been intensely bitter—far beyond anything this province has ever seen before, in matters pertaining to medicine. Letters "by the ream" appeared in the lay press, telling the public of Ontario that the members of the Medical Council were guilty of "extravagance," "wastefulness," "transgressions of the law," "dishonesty," "untruthfulness," "fraud," and a few other somewhat objectionable peculiarities and idiosyncrasies.

It is only fair to add that the charges referred to were brought against men, not as private individuals, but as servants of the general profession, honored in having committed to their care a public medical trust. Criticisms of their acts were quite pertinent, but violent language such as that used by many of the critics was, to say the least, quite unnecessary and undignified. Unfortunately, many of the replies on behalf of the council were quite as violent as the attacks, while, at the same time, some of them were almost babyish in their weakness. At the last meeting of the council the retiring president delivered an address, able in character, but not altogether wise. Immediately thereafter the "Defence" champions rushed to the newspapers, and some of their letters were not simply violent—they were vicious. The ex-president was so seriously affected that he apparently lost his head, and published a letter which made no pretence of answering any arguments, but simply contained a coarse and vulgar personal attack on a leading member of the Defence Association. We have no desire to discuss this unfortunate business in detail, but we feel compelled to enter a very decided protest against such conduct, involving, as it does, a gross violation of all the decencies connected with journalistic controversies. If the warfare be continued, we hope that better methods will prevail on both sides.

THE NEW COUNCIL.

A LIST of the successful candidates will be found in this issue. We cannot say that the results of the elections have furnished any great surprises. It will be noticed that three of the most able and most prominent members of the Defence Association, Drs. McLaughlin, Sangster, and Armour, have been elected. Dr. McLaughlin was a member of the council many years ago, and is generally acknowledged to be an able and conscientious man. His election by acclamation is a popular one. Dr. Sangster distinguished himself in the recent battles as a fighter of ability, and we believe the majority of physicians in Ontario will be glad to see him in the new *parliament*. Personally, we regret the defeat of Dr. Cotton, whose character and ability fully qualify him for a seat in the

Council; but, considering the strength of the forces combined against him, his defeat by the leader of the Defence Association, in a division where the influence of that body was overwhelmingly strong, will create no surprise, and will leave no cloud of any sort hanging over him. The contest between the president, Dr. Philip, and Dr. Armour was conducted with great vigor on both sides. Dr. Armour was, so far as we know, the originator of the Defence Association. At all events, he has been from the first one of the most active workers in its ranks. Dr. Philip was, on the whole, an excellent member of the council, and was highly respected by his colleagues, as shown by his unanimous election to the presidency during the last session. All things considered, however, it is probably well that these three Defence men have been elected. They certainly represent a large portion of the electorate, and it seems a matter of justice that this trio should assume the responsibilities of office. Dr. Vardon, of Galt, another very active member of the Defence Association, was defeated by Dr. Brock, of Guelph.

Of the twelve territorial representatives in the last council only four remain—Drs. Bray, Williams, Henry, and Rogers. The election of Dr. Rogers is remarkable from the fact that it means the defeat of the able and well-known veteran, Dr. Bergin. The four mentioned will be fully able to represent the "Old Guard," and their election will be considered by a large proportion of the profession as a legitimate matter for congratulation. Drs. McLaughlin and Shaw, having been representatives before, should not be placed in the *freshman* class.

There will be an unusually large number of new men, from whom we will expect much. They are, as a rule, endowed with ability and good judgment. They are, speaking in a general way, *no party* men, and are not likely to go to extremes, either in the direction of radicalism or fossilism. We hope that partyism, if it be continued on the present lines of Defence and anti-Defence ideas, will be kept within the bounds of decency and order; and that any discussions of the burning medical questions of the times, though they may be animated, will not degenerate into unseemly wrangling. Upon the whole, we think the various electors have chosen wisely and well, and, as a consequence, we will have in the new council a body of medical legislators who will do credit to themselves and their constituents.

SUBSTITUTION BY INSTRUMENT MAKERS.

IN our report of the proceedings of the American Association of Obstetricians and Gynæcologists (pp. 794-5), our readers have probably noticed that Dr. Murphy, of Chicago, called the attention of the members to a defective button that was purported to be a Murphy

button. He pointed out the defects, and showed the particular danger that would arise from these defects.

A man's reputation, earned by hard and conscientious work, can easily be harmed by his friends. Men devise new operations and invent new instruments to aid their being properly carried out, report their progress, and, by every legitimate means, endeavor to aid others in repeating these operations. The only fair means of judging whether that particular procedure is a good one, and that the reports of the results attained are absolute, is by test repetitions of the operation ; but these should be done with the same precaution, the same careful technique, and with instruments similar to those used by the inventor. Very few men investigate far enough the technique of an operation before proceeding to perform it, and some, by failure, bring discredit on the originator, or else rush into print with a modification, which is no modification except in adding a new name. Instrument makers purchase an instrument in the open market, for a sample, which may be defective in itself, and, in a great number of cases, never submit an instrument to the inventor for his opinion, but proceed to manufacture and cheapen the instrument, while still calling it by the original name. Bad results cannot help following, and the operation is blamed. It was a very striking instance of this that brought the matter to the writer's attention. Dr. Murphy, of Chicago, was requested to do an anastomosis at St. Michael's Hospital, Toronto, and he was handed a button, recently purchased by one of the staff, to use. He at once detected its faults, and pointed them out, and showed a button that was properly made that he had in his pocket ; yet several of us had seen the button, but did not detect these very dangerous defects. We cannot be too careful, in purchasing instruments, to get proper quality, and to do so we often have to pay a little more than supposedly similar goods could be purchased from other dealers. It is best always to buy from reliable dealers, and those who guarantee their goods with their reputation. Medical ethics does not permit of instruments being patented, but there are instances where it might save lives. We remember that Dr. Otis, when he devised his urethratome, thought of these impositions of instrument makers, and wanted to patent it and hand the patent to the Academy of Medicine, but they would not consent. Yet that instrument has been badly curved and twisted, so that it was impossible to do Otis' operation as done by him ; yet it was called and sold as Otis' urethratome. We could give other instances, but that would be superfluous. The only moral that can be drawn from the above is to always familiarize oneself with the *details* of an operation, and any new device that is to be used in the procedure, and purchase the latter from a reliable source.

Correspondence.

THE RESULT AWAITED AND THE RESULT ANTICIPATED.

DEAR EDITOR,—“If I had appendicitis, I would lie in bed, take salines, apply poultices, and await the result.”—M.D. (possibly a reincarnation of B.C. 710), in a recent medical journal. Who among us, even in a most limited sphere, cannot recall cases of this affection where the attendant did *await the result*, which result was occasionally of greater interest to the undertaker than to the physician? This subject has been so thoroughly threshed out that repetition should be unnecessary, but still, with all the light that has been thrown upon this region of the abdomen, the slaughter continues, encouraged by such statements as the one I have quoted. By way of illustration of the “await the result” method, I give notes of a case that came under my observation while practising in Bruce county, Ont., previous to the ushering in of the appendicitic era, and also, by way of comparison, notes of a case very similar in a rural district forty miles from town, but happily happening after the commodious and convenient “inflammation of the bowels” had been resolved into its component parts :

CASE 1. J. P., æt. 39, farmer, overheated and chilled, presented symptoms now recognized as indicative of appendicitis. Received the orthodox poultice, etc. In a few days I was comforted with the thought that “the inflammation of the bowels was under control,” temperature fell to normal, pain ceased, and all that remained was a distended abdomen with increased dullness towards the right side. Believing my patient convalescing, I discontinued regular daily attendance. A few days later I was called to explain a sharp pain in right fossa occurring after a motion of the bowels. Neuralgia, muscular rheumatism, and a few other convenient terms were used, to the apparent satisfaction of the friends. Next day found the patient comatose. The *result awaited* was rupture of abscess into the peritoneal cavity, septic inflammation, and death.

CASE 2. J.E., æt. 31. First attack, course of disease similar to that of Case 1. Had received well-directed treatment for upwards of a week,

when attendant concluded that something other than poultices and salines were required. When seen, pulse was 80, temperature normal, and patient comfortable, abdomen tympanitic, no dullness perceptible per rectum, Douglas' sac distended and tense. Upon opening the abdomen (Dr. Jones), the deeply congested and inflated intestines filled the opening, and proved troublesome by obstructing the field. In the right fossa was an abscess containing two ounces of pus; appendix gangrenous, except base, which was ligated. A second abscess, completely distinct from the former, was found occupying the pouch, and containing about six ounces of pus. The abdomen was thoroughly irrigated with boiled water, adhesions separated, and drainage applied. Recovery was somewhat retarded by defective after-dressings, but the ultimate result left nothing to be desired.

With such cases not infrequent in our experience, and with many reported in the journals, it seems to be possible that the definite teaching of surgery is still meaningless to some of our worthy members. If the results of surgical interference in this disease were disastrous, we could excuse such expressions; but with a mortality almost *nil* there is no excuse for such a statement as, "If I had appendicitis, I would lie in bed, take salines, and await the result."

ERNEST HALL.

Victoria, B.C.

Book Reviews.

Books received :

INEBRIETY AND NARCOMANIA: Its Etiology, Pathology, Treatment, and Jurisprudence. By Norman Kerr, M.D., F.L.S., Fellow Med. Soc., London ; President Society for Study of Inebriety, etc. Third edition. 8vo., 780 pages ; \$5. London : H. K. Lewis, 136 Gower street, W.C.

MEDICAL NURSERY. Notes of a lecture given to the probationers at London Hospital by the late James Anderson, M.D., F.R.C.P. Edited by Ethel F. Lamport, Associate of the Sanitary Institute, etc., etc. With an introductory biographical notice by Sir Andrew Clark, Bart. Crown octavo. London : H. K. Lewis, 136 Gower street.

A MANUAL OF SURGERY, GENERAL AND OPERATIVE. By John Chalmers DaCosta, M.D., Demonstrator of Surgery, Jefferson Medical College, Philadelphia ; Chief Assistant Surgeon, Jefferson Medical College Hospital ; Surgical Registrar, Philadelphia Hospital, etc. One very handsome volume of over 700 pages, with a large number of illustrations. (Double number.) Price, cloth, \$2.50 net.

TEXT-BOOK OF NERVOUS DISEASES. Being a compendium for the use of students and practitioners of medicine. By Charles L. Dana, A.M., M.D., Professor of Nervous and Mental Diseases in the New York Post-graduate Medical School and in Dartmouth Medical College, etc. One volume post octavo, 525 pages. Illustrated by 204 wood engravings, over half original. One plate. Bound in red parchment cloth. Price, \$3.25. William Wood & Company, New York.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS : A Manual for the Use of Physicians, Surgeons, and Students. By Charles W. Purdy, M.D., Queen's University ; Fellow of the Royal College of Physicians and Surgeons, Kingston ; Professor of Urology and Urinary Diagnosis at the Chicago Post-graduate Medical School. Author of "Bright's Disease and Allied Affections of the Kidneys" ; also of "Diabetes : Its Causes,

Symptoms, and Treatment." With numerous illustrations, including photo-engravings and colored plates. In one crown octavo volume, 360 pages, in extra cloth, \$2.50 net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

TEXT-BOOK OF HYGIENE : A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American standpoint. By George H. Rohé, M.D., Professor of Therapeutics, Hygiene, and Mental Diseases in the College of Physicians and Surgeons, Baltimore ; Superintendent of the Maryland Hospital for the Insane ; Member of the American Public Health Association ; Foreign Associate of the Société Française d'Hygiène, etc. Third edition, thoroughly revised and largely rewritten, with many illustrations and valuable tables. Royal octavo, 553 pages. Cloth, \$3 net. Philadelphia : The F. A. Davis Co., Publishers, 1914 and 1916 Cherry street.

A MANUAL OF THERAPEUTICS. By A. A. Steven, A.M., M.D., Lecturer on Terminology and Instructor in Physical Diagnosis in the University of Pennsylvania ; Demonstrator of Pathology in the Woman's Medical College, Philadelphia ; Physician to St. Mary's Hospital and to the South-eastern Dispensary ; Pathologist to St. Agnes' Hospital. Philadelphia : W. B. Saunders, 1894.

This work is intended to place before the student a practical outline of modern therapeutics, and, considered as a whole, is deserving of high commendation. The book may, for the purpose of reviewing, be divided into five parts.

Part I. is devoted to a classification of drugs under their pharmacological heads, and, if fault may be found, we are of the opinion that the author has erred on the side of brevity. A description of drugs, alphabetically arranged, occupies the succeeding section. More attention is paid to therapeutics and administration than to physiological action. The student will find described in this division all the recently discovered preparations. Then follows a short discussion on remedial measures other than drugs, such as electricity, massage lavage, disinfection, etc. The latter part of the work is principally devoted to applied therapeutics, probably the most valuable portion of the work. The application of the particular drugs which have been found most useful in the treatment of each disease is here discussed. The volume closes with tables of doses, indices of diseases and remedies, and a short chapter on incompatibility. The volume contains 450 pages, and is a very creditable specimen of printing and binding.

DISEASES OF THE SKIN : AN OUTLINE OF THE PRINCIPLES AND PRACTICE OF DERMATOLOGY. By Malcolm Morris, F.R.C.S., Surgeon to the Skin Department, St. Mary's Hospital, London, etc. In one 12mo. volume of 572 pages, with 19 chromo-lithographic figures and 17 engravings. Cloth, \$3.50. Philadelphia : Lea Brothers & Co., 1894.

We have read, with a great deal of pleasure, the above work, and can thoroughly recommend it both to the practitioner and student. It is particu-

larly adapted to the use of students. It is concise, complete, and up to date, and, at the same time, no space is wasted in useless words. Mr. Morris is one of the foremost English dermatologists, and has the happy faculty of imparting his knowledge in a pleasing manner. The arrangement of the work is one to be commended, and the first three chapters, on "Pathology of the Skin," "Classification," and "Principles of Diagnosis," will lead many an erring student into the right road if their precepts are followed. The pathology throughout the whole work is right up to date, and treatment is fully considered. We do not appreciate the colored drawings as we would like, from the too high coloring. It is a fault with most colored plates in skin diseases. The drawings are admirable, but the coloring too high. It is the fault of the lithographer, not the artist. The Germans are the only ones who appear to color correctly.

The typography, presswork, and binding are in the very best style of Lea Brothers & Co.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS. With especial reference to the application of remedial measures to disease, and their employment on a rational basis. By Hobart Armory Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical Hospital; Consulting Physician to the Franklin Reformatory Home; Laureate of the Royal Academy of Medicine in Belgium, of the Medical Society of London, etc. Fourth edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers & Co., 1894.

The value of this excellent work to the medical profession is well evidenced by the fact that no less than four editions have been issued in as many years. The volume is divided into four parts devoted respectively to general therapeutical considerations, drugs, remedial measures other than drugs, and diseases with their special treatment. Part I. deals with modes of administration, dosage, absorption, strength, incompatibles, and a classification of drugs under their various therapeutic heads. In Part II. all the drugs in general use, including those more recently added to the list, such as methylene blue, dermatol, condurango, convallaria, chloralose, piental, piporazine, trional, etc., are dealt upon. Such drugs are arranged alphabetically, and each drug is described as to sources or preparation, physiological action, therapeutics, toxic properties, and method of use. Such remedial measures as acupuncture, antiseptics, heat, cold, climate, foods for the sick, enteroclysis, intravenous injection, rest cure, etc., are extensively dealt with in Part III. The concluding portion of the book is occupied with methods of treatment in the different diseases classified alphabetically. Not only has the author indicated the drugs best adapted to particular diseases, but has entered carefully into the question as to the best treatment at particular stages and conditions. Throughout the work all weights and measures are given both in the metric and English system, so as to render it uniform with the new United States Pharmacopœia.

In conclusion, we may say that we know of no work more suited to the needs of the student and the general practitioner who desires to have a greater knowledge of modern therapeutics.

A SYSTEM OF GENITO-URINARY DISEASE, SYPHILOLOGY, AND DERMATOLOGY. By various authors. Edited by Prince A. Morrow, A.M., M.D. In three volumes. Published by D. Appleton & Co., New York. Toronto agency, Geo. N. Morany, 63 Yonge street. Subscription only. Volume III., "Dermatology."

We have before us the last volume of the above system—"Dermatology." It, like its predecessors, is a most complete collection of the good works of the many authors. It is impossible to pass each chapter in review before us, and almost as difficult to choose which to speak of in particular. All are good, up to date, and complete. What the general practitioner most requires is to be found here—aid to diagnosis and treatment. He is not overburdened with historical facts and obsolete pseudonyms. History and titles are referred to, but no space is wasted. The index of this work is a valuable acquisition in itself. It is very thoroughly arranged, and is a great aid to the busy practitioner in his hunt for reference material.

Possibly the most complete and really new material in the volume is the chapters on "Leprosy," by Dr. Prince A. Morrow. These embrace the researches made by Dr. Morrow during his trip to Hawaii, and include a most interesting series of photographs made by him at the same time. Every phase of the disease is beautifully pictured in all its hideous manifestations. It is unnecessary to say that the chapter reads like a serial story, so beautifully is it woven together.

This is the day of bacteriology, and that particular exciting cause of many forms of skin lesion has received a very thorough examination. We can recommend this system to every practitioner, and feel sure that it will be of most practical value to him. The binding, typography, presswork, etc., are of the highest order, as all of the works of D. Appleton & Co. are.

A SYSTEM OF LEGAL MEDICINE. By Allan McLane Hamilton, Consulting Physician to the Insane Asylums of New York City, and Lawrence Godkin, Esq., of the New York Bar. With the collaboration of Prof. Babcock, etc. Illustrated. Volume I. New York: E. B. Treat, Cooper Union, 1894.

This encyclopædia of medical jurisprudence will be published in two volumes. The first volume, which is a handsome book of nearly 700 pages contains contributions on the following subjects: "Medico-legal Post-mortem Examinations"; "Death in its Medico-legal Aspects"; "Blood, and Other Stains"; "Identity of the Living"; "Identity and Survivorship"; "Homicide and Wounds"; "Poisoning"; "Toxicological Importance of Potomains and Other Putrefactive Products"; "Life Insurance"; "Accident Insurance"; "The Obligation of the Insured and the Insurer"; "Legal Relations of Physicians and Surgeons to Their Patients and One Another"; "Indecent Assault upon Children."

The contributors, both legal and medical, are men of high standing in the United States, and have sufficient weight to speak with undoubted authority on the various subjects connected with medical jurisprudence. Mr. Lawrence

Godkin tells us that the science of forensic medicine had its beginning in 1553, when the Emperor Charles V. of Germany directed that the opinions of medical men should be taken in cases of death by violence with a suspicion of a criminal agency, and goes on to give a very interesting account of its progress up to the present time.

Some contributions by eminent lawyers give much valuable information on subjects which frequently arise in court, but are not, as a rule, fully treated in our ordinary text-books on medical jurisprudence. Much new material in the way of experimental work is presented in this volume, especially with respect to gunshot wounds and blood stains. The report of the investigations of Dr. Victor C. Vaughan in regard to ptomaine poisoning is exceedingly interesting, and, in some respects, rather startling. The chapter on life insurance deserves special mention, being the best we have seen on the subject.

It is very difficult, in a brief review, to give anything like an adequate idea of the merits of this work. As to the first volume, we find nothing that deserves adverse criticism. All the chapters are admirable, and the matter all fully up to the times. We believe every medical practitioner should have this "System of Legal Medicine."

CHOREA AND CHOREIFORM AFFECTIONS. By Wm. Osler, M.D., F.R.C.P.;
London ; Professor of Medicine Johns Hopkins University, Baltimore, etc.
London : H. K. Lewis, 136 Gower St., W.C.

In this latest work Professor Osler deals exhaustively with the interesting affection chorea, and the not less interesting, if rarer, affections closely allied to it. The author draws largely upon the records of his own cases and those of his colleagues in the Infirmary for Diseases of the Nervous System, Philadelphia. The list taken from this source includes 554 cases. In addition to this wide experience, medical literature, current and remote, has been utilized to place before the reader whatever may be of interest, whether in the way of historical views as to nature and pathology, or peculiar phases of the disease. The author deals at length with the heart inflammation so commonly met with in chorea. The records cited indicate in what proportion of cases is endocarditis likely to occur, and also in what proportion is this endocarditis followed by permanent heart derangement. Of 554 cases 170 presented heart murmurs, and in fatal cases the frequency of endocarditis is so great as to make the statement true, "that there is no known disease in which endocarditis is so constantly found, post mortem, as chorea." Of 140 cases examined by the author and his colleagues two or more years after the attack of chorea, there were signs of organic heart disease in 72.

With reference to the pathology of the disease there is still much that is obscure, and what had been written early in the century would still apply. Regarding the relation of chorea to acute rheumatism, the writer puts the question : "Are its symptoms merely manifestations of the rheumatic poison, or does the arthritis bear the same relation to chorea as the joint inflammation to gonorrhœa or to cerebro-spinal fever?"

Coming to choreiform affections, chapters are devoted to the various forms of tic, habit spasms, etc., and cases are related to illustrate the peculiar phases of these choreiform movements and their association with peculiar mental states and special sense derangements.

A chapter is devoted to chronic progressive chorea in chronic hereditary chorea, sometimes termed Huntington's disease. Histories of two families in whom this condition passed from one generation to another are included in this chapter.

Altogether, the book contains within its 125 pages a wealth of information on the subject, and represents a vast amount of work on the part of its author. We are glad to have had an opportunity of reading the book, and can confidently recommend it to our subscribers as a work calculated to broaden one's ideas as to the true nature and scope of chorea.

Medical Items.

CORRECTION.—In the report of a case of Primary Diphtheritic Laryngitis in our last number a misprint occurred. The quantity of calomel sublimed was "thirty" grains, not "three" grains as stated.

DR. MAY, of Chicago, was in town in October to attend his brother's funeral.

DR. H. E. BUCHAN, who has been on the staff of the asylum in Kingston, has been transferred to London.

DR. THOS. S. CULLEN (Tor., '90) has been appointed assistant in gynecology in Johns Hopkins Hospital.

DR. BRUCE L. RIORDAN, of this city, was elected third vice-president of the National Association of Railway Surgeons.

DR. J. H. AUSTIN, of Brampton, has just returned from England. He is recovering from pneumonia, contracted in London.

DR. JAMES M. FORSTER, late of "Orchard House," Hamilton, has been promoted to be assistant superintendent of Kingston Asylum.

DR. BRUCE SMITH, who received an appointment in the Hamilton staff some months ago, has left Seaforth, and is now in charge of "Orchard House."

DR. N. H. BEEMER, who has been appointed superintendent of the Asylum for Insane, Mimico, was instructed to take charge of the institution November 15th.

DR. OLIVER WENDELL HOLMES, the distinguished ex-professor of Harvard, and well-known author, died at his home in Beverley, Mass., October 7, at the age of 85.

DR. T. P. McCULLOUGH has sold his practice at Everett, Ont., to Dr. Kingston, of Stirling. Dr. McCullough is leaving for New York, where he will study diseases of the eye, ear, etc.

DR. C. R. DICKSON was elected second vice-president of the American Electro-Therapeutic Association, and appointed chairman of the Standing Committee on Electrodes. The association will hold its 1895 meeting in Toronto, most likely in September.

DR. HUNTER ROBB, late assistant in gynæcology at the Johns Hopkins Hospital, has been elected to the chair of gynæcology in the medical department of the Western Reserve University.

DR. W. OSLER, of Baltimore, spent the greater part of the summer in England. After attending the meeting of the British Medical Association at Bristol he spent some time in London and Oxford. He paid a short visit to Toronto, September 24-28, on his return, after which he went to Baltimore.

DR. ARCHIBALD H. MACKINNON died in Everton, September 27, 1894, after a long illness. He took his course in the Toronto School of Medicine, graduating in 1877. He practised in Hillsburg for several years, and was highly successful as a medical practitioner, and greatly respected as a high-minded citizen. He removed to Toronto in 1892, but failing health prevented him from doing much professional work.

PHILADELPHIA AS A MEDICAL CENTRE.—According to the Philadelphia newspapers, that city is again asserting its right to special prominence as a medical centre. The census of the medical schools is as follows: University of Pennsylvania, 875; Jefferson, 700; Hahnemann, 325; Medico-Chirurgical, 300; Woman's, 200; total, 2,400.

The following candidates have passed the primary examination:—J. Beeket, Thamesville; W. L. Coulthard, Toronto; B. F. Churchill, Toronto; P. G. Goldsmith, Peterborough; J. Gibbs, Bayview; D. Jamieson, Barrie; J. M. Jory, Norwood; J. Jardine, Toronto; Eleanor Lennox, Toronto; J. A. Marquis, Brantford; W. G. MacKechnie, Brighton; T. Sneath, Midhurst; H. H. Sinclair, Walkerton; Thos. Wilson, Elm; F. A. White, Aylmer.

FOR THE LUBRICATION OF CATHETERS.—To facilitate the exploration of the urethra and bladder in his wards in the Necker Hospital, Professor Guyon (according to the Paris correspondent of the *Lancet*) is in the habit of using the following formula: Powdered soap, 4 drams; glycerine and water, of each 2 drams; mercuric chloride, 1 grain. This ointment is said not to be irritating to the urethra, and to be endowed with much greater lubricating powers than either oil or glycerine.

THE TREATMENT OF APPENDICITIS.—At the last meeting of the Board of Managers of the University Hospital the director was authorized to set aside certain beds to be used by Professors William Pepper and J. William White for cases of appendicitis, those gentlemen being engaged in a special investigation of the symptoms, treatment, and pathology of that disease. Each case admitted to these beds will thus be studied from the outset with reference to both its medical and surgical features. It is hoped that the results may aid in clearing up the prevalent differences of opinion as to this malady.—*Medical News*.

FIRST AID.—She had attended the ambulance classes and obtained the certificate. The street accident she had earnestly prayed for took place. A man had broken his leg. She confiscated the walking-stick of a passer-by and broke it into three pieces for splints. She tore up her skirt for bandages.

When all was completed she summoned a cab, and took her patient to the hospital.

"Who bandaged this leg so creditably?" inquired the surgeon.

"I did," she blushing replied.

"Well, it is most beautifully—most beautifully done; but you have made, I find, one little mistake. You have bandaged the wrong leg."—*Tid-Bits*.

SUPPLEMENTAL EXAMINATIONS, ONTARIO MEDICAL COUNCIL.—The following candidates have passed the final examination, held in September, and are therefore admitted as members of the College of Physicians and Surgeons of Ontario:—W. Arrell, Caledonia; W. A. Ball, Toronto; Ellen A. A. Burt, Toronto; W. L. Coulthard, Toronto; G. M. Ferris, Campbellford; J. Jardine, Toronto; J. M. Jory, Norwood; Thos. Kerr, Toronto; K. C. McIlwraith, Hamilton; E. J. O'Connor, Ottawa; W. H. Scott, Toronto; J. S. Shurrie, Trenton; H. H. Sinclair, Walkerton; A. T. Shillington, Kemptville; J. T. Somerville, Clifford, Mich., U.S.A.; J. Stenhouse, Toronto; F. W. Stockton, Richwood; Thos. Wilson, Elm; D. Thomson, Woodbridge; F. A. White, Aylmer.

DOCTORS AS COMPANIONS.—The following passage from Mr. James Payn's "Gleams of Memory," now appearing in the *Cornhill Magazine*, will be interesting to members of the medical profession: "Upon the whole, and for a 'scratch' companion, I prefer a doctor to a man of any other calling. He may not be very good as a conversationalist, but he is rarely very bad, like a cheroot. He has had a genuine experience of life, and has seen down to the depths of it; a sick man does not attempt to deceive his doctor, or put the best face on his character, as he does with a priest. Moreover, what is very unusual, your doctor knows more about you, professionally at all events, than you know about yourself. He does not tell you about it, it is true; not a word of that aneurism you carry about with you, and which will some day kill you in half a minute, but your consciousness that he may possess such knowledge makes him interesting. The best suggestions I have had made to me for plots for my novels have come to me from doctors, to whom I have also had cause to be grateful for many things."—*N. Y. Med. Record*.

SCARLET RASH AFTER ENEMATA.—The occasional occurrence of a bright scarlet rash after injections of warm water into the bowel should be borne in mind. The rash appears in about two hours after the injection, and lasts about twenty-four hours. It covers the whole of the body and limbs, and is especially marked on the face. In rare cases it is accompanied with sore throat and slight fever. The rash is almost exactly like that of scarlet fever, and may easily be diagnosed as such, especially if a sore throat is also present. It occurs more commonly in children than in adults, and is occasionally distinctly urticarial. It is due to toxæmia caused by absorption of fecal matter liquefied by the injection of a large quantity of warm fluid into the rectum. In all cases of supposed scarlet fever it will be well to exclude the possibility of the rash being due to an aperient enema.

I have lately met with two well-marked illustrations of this toxæmic rash. Case 1 was that of my own son, aged 11. I was told that a scarlet rash had come out on him. I found that he was covered with a bright scarlet rash, but there was no sore throat, no fever, and no increase in the pulse rate. A soap and water enema had been used about two hours before the rash was noticed. I could not diagnose the case until, thinking it over, I remembered making a note on rashes after enemata. On reference I find the note was made from a very interesting paper by Dr. Burford, "On a Mild Form of Septic Toxæmia Occurring after Enemata."* The rash disappeared in about twenty-four hours, and the boy was quite well. Case 2 I met with at the Queen's Hospital. A little girl was to be operated upon, but just before the operation a scarlet rash was observed on the child, and I was asked to see her. On enquiry I found that a soap and water enema had been used that morning. There was no sore throat or fever, and the rash shortly disappeared.—C. W. SUCKLING, M.D., in *British Medical Journal*.

A MODEL SURGICAL CLINIC.—Scene, a spacious room. At a large table in the centre is seated the surgeon; his secretary is opposite, an enormous folio register open before him. A group of students is clustered about the table. Benches filled with waiting patients occupy the sides of the room. The secretary calls No. 120,736. A man aided by crutch and cane limps forward. The surgeon's examination into the biography and genealogy of the patient (four folio pages carefully written out by the secretary) being ended, the attendant removes the multiple wrappings of the right foot, exposing an inflamed great toe with ulceration upon one side of the nail. The surgeon gives it a hasty glance, and, turning, addresses the students as follows:

"Gentlemen, a few years ago a case of this kind—evidently an ingrowing nail—would have been at once submitted to local treatment, and, I admit, with fair prospects of obtaining a good result. But now that we have learned the general interdependence of the different organs of the body, we feel that a thoroughly scientific treatment demands the examination by specialists of these different organs, in order to detect any condition, likely to be etiological factors in the case. The attendant will therefore take him and a copy of his history to the different rooms in succession, and return here with their respective official reports."

[*Some Hours Later.*]

Surgeon (loquitur).—"Gentlemen, the patient has now returned to us, and I ask your attention while I read the reports of the various specialists."

Ophthalmological Department.—Case No. 120,736. This patient is myopic. As I recall a case where a similar visual defect was the cause of injury to the great toe in a person who "stubbed" it against the curbstone, I have ordered appropriate lenses to correct the difficulty, as a prophylactic against the recurrence of the disease. It is essential, however, that this treatment should be supplemented by wearing a loosely-fitting shoe.

Otological Department.—Case No. 120,736. I find no defect of audition. As the patient's trouble may have arisen from want of suitable support to the foot, I have thought it best to shorten the stapes leather two holes.

**Lancet*, December 15th, 1888.

Rhinological Department.—Case No. 120,736. A case of nasal tone ail. Wishing to bring about a radical change in the parts, I have removed with the curette all adenoid growths, together with the adherent mucous membrane, from the cavities, and packed them all with aseptic gauze—which should be removed if the patient wishes to sneeze.

Department Abdominal Surgery.—Case No. 120,736. Drs. A., B., and C., in consultation. The history showing that the patient's mother during life lost a set of false teeth, Dr. A., reasoning that "tooth and nail" are generally associated in action, is inclined to think the set may have been swallowed unconsciously and remained in the patient's stomach. Of course, he advises an operation.

Dr. B., in view of the accepted belief that "*Gallia est omnis divisa in partes tres*," thinks it possible that one of them may have wandered down to the great toe, and advises an exploratory incision of the gall-bladder to ascertain if either part be missing. The "*Gallic boot of love*," cited by Dr. O. W. Holmes, seems to indicate a tendency of the gall to the foot.

Dr. C. concurs entirely with both of these opinions, but on general grounds advises the removal of the appendix. The patient, however, avers that this has been already done, and that he has it in a bottle at home, which he will fetch if required. It is therefore deemed advisable to await further development.

Gynæcological Department.—Case No. 120,736. Palpation reveals no abnormal condition of uterus or appendages. A medical student calling our attention to the fact that the patient wears pants and has well-developed male generative organs, we doubt if this is a proper case for this department.

Department Genito-Urinary Diseases.—Case No. 120,736. Organs apparently healthy. It, however, is not impossible that the patient may have had a stone (vesical) which was passed naturally and impinged upon and injured the great toe.

Department of Neuroses, etc.—Case No. 120,736. The result of a careful examination of this case indicates a deficient innervation of his lower extremities. Two well-marked areas of impaired sensibility or partial anæsthesia are located in the gluteal regions beneath the tuberosities of the ischia. His history not mentioning this, we questioned him as to how long the condition had existed. His replies were unsatisfactory—merely to this effect, that he had "sat so long upon those d—d hard benches that his — got numb." A rubber cushion with two holes is recommended, and the case should be kept under observation.

"There, gentlemen," continued the surgeon, as he finished reading to them the reports, "you have the result of a careful scientific inquiry into this case.

"I shall now send the patient to the chiropodist around the corner, with instructions to have the toe cleansed and a piece of sheet lead inserted under the roughened edge of the nail. I counsel you all not to lose the opportunity of witnessing the operation. Good morning, gentlemen!"—*Boston Medical and Surgical Journal.*—*The Quarterly Medical Journal.*

THE MEDICAL COUNCIL ELECTIONS.

The results of the recent elections are as follows :

TERRITORIAL REPRESENTATIVES.

- Division No. 1—Dr. J. L. Bray, Chatham ; acclamation.
 “ 2—Dr. J. A. Williams, Ingersoll ; acclamation.
 “ 3—Dr. W. F. Roome, London ; acclamation.
 “ 4—Dr. W. Graham, Brussels ; acclamation.
 “ 5—Dr. Brock, Guelph, elected ; opposed by Dr. Vardon, Galt.
 “ 6—Dr. Henry, Orangeville, elected ; opposed by Dr. Smith, Orangeville.
 “ 7—Dr. G. M. Shaw, Hamilton, elected ; opposed by Dr. D. Heggie, Brampton.
 “ 8—Dr. J. P. Armour, St. Catharines, elected ; opposed by Dr. D. L. Philp, Brantford.
 “ 9—Dr. John Hanley, Waubaushene, elected ; opposed by Dr. W. D. C. Law, Beeton.
 “ 10—Dr. J. E. Barrick, Toronto ; acclamation.
 “ 11—Dr. H. T. Machell, Toronto ; acclamation.
 “ 12—Dr. J. H. Sangster, Port Perry, elected ; opposed by Dr. J. M. Cotton, Lambton Mills.
 “ 13—Dr. J. A. McLaughlin, Bowmanville ; acclamation.
 “ 14—Dr. Thornton, Consecon, elected ; opposed by Dr. Ruttan, Napanee.
 “ 15—Dr. W. Spankie, Kingston, elected by the casting vote of the returning officer ; opposed by Dr. W. W. Dickson, Pembroke.
 “ 16—Dr. R. Reddick, Winchester, elected ; opposed by Dr. R. F. Preston, Newboro.
 “ 17—Dr. A. F. Rogers, Ottawa, elected ; opposed by Dr. D. Bergein, Cornwall.

COLLEGIATE REPRESENTATIVES.

- Dr. W. Britton, Toronto, University of Toronto.
 Dr. J. W. Rosebrugh, Hamilton, University of Victoria College.
 Dr. V. H. Moore, Brockville, University of Queen's College.
 Dr. W. T. Harris, Brantford, University of Trinity College.
 Sir James Grant, Ottawa, University of Ottawa.
 Dr. J. Thorburn, Toronto, Toronto School of Medicine.
 Dr. F. Fowler, Kingston, Royal College of Physicians and Surgeons, Kingston.
 Dr. W. B. Geikie, Toronto, Trinity Medical College.
 Dr. W. H. Moorehouse, London, Western University, London.

HOMOEOPATHIC REPRESENTATIVES.

- Dr. George Logan, Ottawa.
 Dr. G. Henderson, Strathroy.
 Dr. C. T. Campbell, London.
 Dr. L. Luton, St. Thomas.
 Dr. W. J. H. Emory, Toronto.

OBITUARY.

DR. WILLIAM GOODELL, the distinguished obstetrician and gynaecologist, of Philadelphia, died October 27th, in the sixty-fifth year of his age.

HENRY RICHARDSON, M.B.—Dr. Richardson, of Ancaster, received his medical education in the Toronto School of Medicine, and graduated in the University of Toronto in 1867. He at once commenced practice in Ancaster, where he remained until the time of his death, which took place suddenly on Sunday, October 28.

HUGEL C. GUELPH, M.B.—The members of this year's graduating class of the University of Toronto were much shocked when they heard that one of their number, Dr. Guelph, had died in London, England, on October 24 from meningitis. He lost his parents in early childhood, and lived thereafter with his aunt, Miss Kent, of Toronto. After securing his degree in June he took a holiday of a few weeks, after which he went to England in August. His illness was short in duration, but otherwise we have not full details at the time of writing. His career as a student was in all respects satisfactory. He left his home apparently in good health, and full of hopeful anticipations of pleasure to be derived from post-graduate work. Death suddenly seized him, and in doing so cruelly crushed very fond hopes of many loving friends.

ROBERT WILLIAM HILLARY, M.B.—Dr. Hillary, of Aurora, died at his late residence on Sunday, October 21, 1894. His health had been poor for some years, but apoplexy was the immediate cause of death. He was born in Dublin, Ireland, in 1832, and was educated at Trinity College in that city. He came to Canada in 1856, and received his license from the Provincial Medical Board in 1857. After this he practised one year at Laskey, King township, and one year at King Station, after which he removed to Aurora, where he soon acquired a large practice, which he retained until his physical powers failed. He was a bright, clever, witty, large-hearted Irishman, generally popular with all classes, and much beloved by his intimate friends and relatives. He was surgeon to the 12th Battalion for twenty-five years, a member of the Ontario Medical Council from 1872 to 1875, president of the Ontario Medical Association 1892-3, and held many prominent offices in Masonic and other orders. His son, Dr. R. M. Hillary (Trin., '90), was associated with him in practice for some years, and will continue his residence and professional work in Aurora.

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Original Communications.

A CASE OF CYSTICERCUS CELLULOSÆ OF BRAIN.*

BY J. M. FORSTER, M.D.,

Assistant Superintendent Asylum for the Insane,
KINGSTON ONT.

IN presenting this case of cysticercus cellulosæ, I desire particularly to describe the cysts found, that I may afford some aid to their future recognition. The pathological condition involved is a very rare one in the human subject, the pig being the common host of this parasite in the cystic form.

The clinical history is obscure, and diagnosis is usually made at the post-mortem table. Griesinger sought to establish symptoms by which it might be detected during life derived from the histories of some fifty cases. These were exceedingly variable. In some, symptoms were entirely wanting. In a second class, epilepsy existed without mental disturbance. In a third, epilepsy was accompanied with mania or imbecility. In a fourth, mental disturbance occurred without epilepsy. In another class of cases, there was neither epilepsy nor mental disturbance till just before death.

* Read before the Hamilton Medical and Surgical Society, September 11th, 1894.

Elizabeth R.—, æt. 37 years, Canadian, of German parents, admitted to Hamilton Asylum, July 18th, 1882. Three years previous to this she was insane for ten months, under treatment in Minnesota Asylum. She was inclined to be irritable at times, but worked regularly in the sewing-room for years. Bodily health generally fair, never robust, and rather sallow and anæmic in appearance. Nothing of interest, other than the above symptoms, was noticeable until March 28th, 1893, when she began to complain a great deal of headache, and looked poorly, but no especial cause could be detected.

May 21st, 1893. She still suffers from her headache, and is constipated. Cathartics relieved the head symptoms temporarily.

October 20th. Her head was better for a time, but she is troubled again with it. Treatment failed to relieve this.

November 10th. This morning she had an attack of an epileptoid character. There was frothing and also some twitching about the mouth, and unconsciousness with lividity, but not much convulsive action. Her sphincters were relaxed. She was unconscious for about five minutes. After a while she recovered sufficiently to walk about the room to look for a purse that had been taken from her during this seizure by the nurse. She had some difficulty in swallowing, could articulate, and complained of feeling generally miserable.

November 13th. Her headache was very severe all last night. Shortly before 11 o'clock this morning she had another convulsion, in which she died.

Post mortem. Post mortem held twenty-eight hours after death. The body was very well nourished, with rigor mortis established. On removing the skull-cap, the membranes were found to be highly injected and slightly adherent, and a quantity of sero-sanguineous fluid escaped. In the arachnoid space, and lying in the sulci of brain, there were found four small cystic tumors about the size of a hazel nut; at the posterior portion of right parietal lobe, on right frontal near Sylvian fissure, on the left parietal lobe, and at outer anterior corner of left frontal lobe. These cysts were not adherent, and, on being rolled out, left a little depression on the brain substance that would admit the tip of the finger. There was an unusually large quantity of serous fluid found in the membranes of brain and in the ventricles. In front of the pons there was a good deal of inflammatory exudation. No other lesions were noticed.

Liver. The liver was enlarged and congested; no cysts present.

Some quite small fibroids subperitoneal were found in uterus. No other cysts discovered in viscera.

Upon microscopical examination, the cysts were seen to be cysticerci cellulosa, but, before treating of the naked eye and microscopical appear-

ances, permit me a few remarks on the history of tapeworms, or cestodes, for the benefit of those who might not be fully acquainted with the subject.

In this group alternation of generation is strictly maintained throughout, *i.e.*, the cysticercus form generates the tapeworm, and *vice versa*.

The tapeworm consists of a head and neck, to which are attached several segments. Each segment, except those near the head, are sexually complete. These mature segments become detached and discharged from the alimentary canal. They are then broken up and the ova are set free. These ova may be taken into the stomach by infected water, herbs, or other means. (Osler states that in violent vomiting of a person affected with tapeworm segments may be forced into the stomach, and thus the individual becomes infected with the cysticercus.) The protective coating of ovum is digested in the stomach, setting free the little embryo, which may here pass into the blood and circulation. It then lodges in subcutaneous tissue, intermuscular septum, membranes of brain, or elsewhere. In its growth it becomes vacuolated, and an imperfect water vascular system develops.

The embryo, as it develops in its new situation, becomes thickened at one point, where invagination takes place, this process going on until complete invagination is accomplished. Thus, it forms a double-walled sac, open at the point of invagination; externally the outer wall or capsule, internally the inner wall, derived from the invaginated portion, and within this the scolex. Looking into the sac, within inner wall, from opening at point of invagination, you first perceive the hooklets (if these be present in the parent tænia), then elevations or suckers, usually four, showing this to be the head of the cysticercus. This constitutes the cystic form.

Secondly, when these cysts are taken into the stomach of man by means of measly pork infected with the cysticercus described above, the cyst wall is digested away, and thus allows the head to become evaginated, or protruded. Passing into the intestine, the hooklets with which it is armed fasten on to the intestinal wall and attaches the head to it. It is then nourished through the suckers and produces the segments, when it matures into a perfect tænia solium.

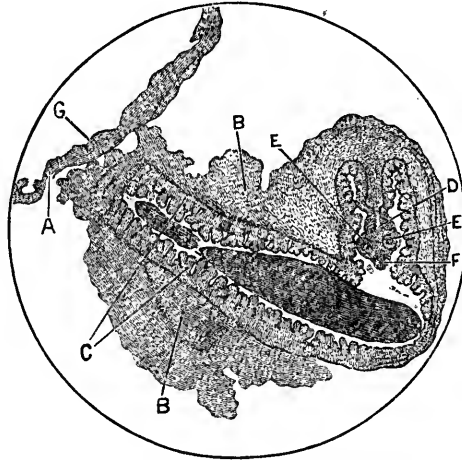
To return to case in point. Gross and microscopical appearances:

Cysts: There were four of these, rather uniform in size, and, as stated previously, about as large as a hazel nut, either circular or oval, and semi-translucent in appearance. Upon section, these proved to be cystic.

The capsule was firm and tense; attached to this was a little body, extending into the cystic cavity, turned on itself at right angles, irregular in outline, about one-quarter of an inch in length, and of a grayish color.

After hardening in Muller's fluid for a month, microscopic sections were made and stained with hematoxylin and eosin.

The cyst wall, of which a small portion is shown at *A*, is well developed, consisting of fibrous tissue, with granular deposits. The inner wall, *B*, is vacuolated, and its lining membrane, *C*, is thrown into folds. At *D* the head is seen with two suckers, *E* showing the radiating fibres.



Cysticercus cellulosæ (section). $\times 50$.

There are only two in this section. Anterior to these on the head is the rostellum, *F*, around which are arranged the hooklets. These could not be shown with the same magnifying power of microscope as this figure represents.

The hooklets were very apparent on another section. There was but one row of them around the rostellum. This fact, together with their size, is characteristic of the *cysticercus cellulosæ*. These are larger than the *echinococcus* hooklets, for which they might be mistaken, and of a different shape, as seen by the accompanying drawing of a *cysticercus cellulosæ* hooklet. At *G* the section is close to the opening in capsule or outer cyst wall where invagination took place. This point was clearly demonstrated by another section.



Hooklet, *Cysticercus cellulosæ*.
 $\times 500$.

In conclusion, I might state that the treatment of these cases is not altogether without hope, for a period of eight months is said to be amply sufficient for the setting in of calcareous degeneration, a process which speedily causes the death of this parasite. Rest, mental and physical, tends to assist nature in this regard.

SHOULD ANTISEPTIC VAGINAL DOUCHING BE MADE A ROUTINE PRACTICE DURING THE PUERPERIUM?*

BY ADAM H. WRIGHT, B.A., M.D.,
TORONTO.

IT is not exactly correct to say that Semmelweiss was the first who informed the obstetric world as to the true source of puerperal septicæmia; but his name stands out so prominently in connection with the various discussions on the subject that he is, by almost general consent, considered the father of modern antiseptic midwifery. In 1847 he clearly and positively enunciated the view that puerperal fever was caused by the introduction of putrescent substances deposited in or about the genital tract of the parturient woman. The confrères of Semmelweiss were somewhat slow in accepting his views; but many earnest workers in various parts of the world in the course of years proved conclusively that they were substantially correct. The investigations and experiments of Pasteur and Lister gave a wondrous impetus towards advancement, and did much to place our knowledge of antisepticism and asepticism on a definite scientific basis.

Lister's practical application of such knowledge to his work in surgery stimulated surgeons and obstetricians in all parts of the world, and caused them to make special efforts to avoid septicæmia. The obstetricians of Germany were especially enthusiastic, and Americans were not slow in following their example. The new ideas and the new methods spread rapidly from hospital to hospital in Germany, France, Great Britain, America, and other countries. In 1872 rigid antiseptic methods were carried out in a systematic way in numerous maternities. Mortality rates had a marvellous fall. Those horrible epidemics of that fearful scourge, puerperal fever, which had slain its thousands, were rapidly being repressed, especially in large maternities. The bright reports and minute descriptions of the various methods were spread broadcast over the whole civilized world, and incalculable good was derived therefrom.

But, gentlemen, puerperal septicæmia, or puerperal infection (call it what you will), still exists. The annual reports of the Registrar-General of

*Read before the American Association of Obstetricians and Gynecologists, at Toronto, Sept., 1894.

Great Britain shows that the death rate from childbirth has not appreciably diminished in England and Wales. In fact, in certain parts of England the death rate from puerperal septicaemia has actually increased in recent years. In the United States and Canada the mortality from this cause is probably less now than it was fifteen years ago, but it is still very high. Why is it that such a deplorable condition of things in connection with the practice of obstetrics continues to exist, notwithstanding the flood of light which has been thrown on the subject during the last fifty years? I will not now attempt to answer the question.

Under the circumstances, it behooves us, as a society which includes obstetrics as one of the subjects within its province, to assist others in carrying on a vigorous fight against this deadly but repressible foe—puerperal septicaemia. With this object in view it was decided by our council, on the advice of Dr. McMurtry, to have a discussion on one of the proposed preventive measures, viz., antiseptic vaginal douching, and I have been honored with the request to open the discussion.

Since the year 1848 antiseptic vaginal douches have been more or less in vogue. In the earlier years chloride of lime, chloride of soda, permanganate of potassium, sulphate of copper, etc., etc., were used by various obstetricians. So far as I know, such injections were first used in America by Fordyce Barker, in the Bellevue Hospital in New York, about forty years ago, and were continued by him as a matter of routine practice about twenty-six or twenty-seven years. In later years carbolic acid became the favorite. In 1876 Tarnier recommended bichloride of mercury, which to-day is probably the favorite antiseptic agent in obstetrical work. I will not mention any of the other numerous antiseptic remedies which have been used, nor will I attempt to discuss their comparative merits.

Vaginal antiseptic douching during the puerperium was most popular between 1875 and 1885. It appeared at one time that it would be universally adopted as a routine prophylactic measure. The method seems so charming in its simplicity, and appeared so perfectly innocuous, that it was considered by many somewhat of a crime to neglect it. In December of 1883, about two years after Fordyce Barker had given up the practice, Gallard Thomas became its most enthusiastic champion. His address on the subject of the prevention and treatment of puerperal fever, delivered before the New York Academy of Medicine, and the discussion which followed, including a paper by Barker, read at an adjourned meeting, were exceedingly able, and created a great deal of interest during the year 1884. The douching wave reached its greatest height about that time, but since then a reaction has set in, and at the present day opinions are divided as to the utility of the measure in normal cases.

I consider it quite unnecessary to enter minutely into pathological

details. Probably all here will admit that puerperal septicæmia is due to the work of living organisms, which are largely, if not altogether, introduced from without. Bacteriologists have taught us much on the subject, but have not yet proved definitely what form, or forms, of bacteria cause the poisoning. Certain kinds of cocci, especially the streptococci, have a certain connection with the sepsis, but exactly what it is we know not now. The bacteria are so much under the influence of surrounding structures, and are subjects to so many modifications, that the study of their life history has been found very intricate and difficult. It seems in some cases that a certain number of bacteria already lodged in the parturient woman are comparatively innocuous until other members of their species are imported from foreign sources, when suddenly all commence to work together with deadly effect; or sometimes they are kept harmless by the surrounding secretions, as, for instance, in the vagina, until they are pushed into other fields, such as the cervical tears, or the uterine cavity, when they immediately wage war. From a clinical standpoint the important thing to recognize is that septic matter—something that cripples or kills our patients—when introduced from without by dirty finger tips, dirty instruments, and from dirty surroundings of all sorts, creates all the mischief.

In order to assist in avoiding the evils, our council directs me to ask the question, Should antiseptic vaginal douching be made a routine practice in the puerperium? In my opinion, no. While I hold a decided opinion, and am quite willing to express it, I have a great respect for many eminent obstetricians who say yes, and am always glad to hear their arguments and, I hope, weigh them carefully. I happen to be one of those who were not captured by the fascinations of vaginal douching as pictured by so many in years past. If I were at all inclined to feel proud of this, my pride ought to be lowered by a consideration of the fact that a large proportion of those who at that time held views similar to mine were too lazy, or too careless, or too indifferent to give the matter much thought or study. I have no feeling but that of contempt for this class of obstetricians, who are mainly responsible, in my opinion, for the high mortality rates which still prevail in midwifery. I have sometimes been misunderstood and misquoted; and, although I am not likely to be misunderstood by the members of this association, I desire to add that no man has a greater desire than I to see a rigid adherence to the modern rules of asepsis and antisepsis on the part of all who practise our obstetric art.

I have studied the subject pretty carefully for the last eighteen years. I was much impressed with many of the favorable reports showing the good effects of vaginal douching. About sixteen years ago, and for a number of years thereafter, I watched the work of a friend in Toronto

who practised the methods. We carefully compared notes, and had many discussions on the subject. His methods of antisepticism both in surgery and obstetrics were very carefully and thoroughly carried out. He had high temperatures more frequently than I; but for years he thought they were due to accident and not to his methods. He thought, as did many others, that the douching with weak solutions of carbolic acid could certainly not do any harm, if carefully done. Although he has since relinquished obstetrics for the more narrow field of surgery, he quite came to the conclusion before his departure that the douching was at least useless in normal cases. I do not know whether it was Breisky or Tarnier who first used the expression, "Everything that is useless is dangerous," but it has always struck me as being both true and sensible. If it can be shown that douching is useless, it is surely better not to carry out a method which is very distasteful to women, whether it be dangerous or not. I think, however, it is both useless and dangerous, and will endeavor briefly to give my reasons, which are founded partly on the results of my own observations, but chiefly on the reports of those who have had experience in the larger maternity hospitals in various parts of the world.

(1) Douching disturbs that perfect rest and quiet which are so desirable for a patient after labor. I do not now refer to surgical rest of wounded tissues, but to rest in a general way, which is so delicious to a weary and more or less exhausted woman. I have often thought, and sometimes stated, that meddlesome midwifery reached the acme of absurdity when, in 1883, a distinguished New York gynecologist recommended about the most persistent and aggressive obstetric meddling that had ever been conceived by the brain of man. He advised, among other things, the administration of a douche every eight hours, and the introduction of an iodoform suppository every two or three hours for at least ten days after delivery; that is to say, the bruised and lacerated vagina was to be invaded from eleven to fifteen times every twenty-four hours for at least ten days, if the unfortunate victim should live so long. Little wonder was it that Fordyce Barker entered a strong and vigorous protest!

(2) Douching is unscientific on surgical grounds. After labor the utero-vaginal canal is bruised and wounded. On surgical principles, the most important points in the treatment are rest, pressure, position, and drainage. By rest I refer to that physiological rest to which so much importance has been attached by Hilton, and many others. The wounds of the cervix and vagina are, as a rule, kept closed by the elastic and even pressure of the surrounding tissues. The introduction of suppositories and douching seriously interfere with rest and pressure as described, and, in my opinion, materially delay the healing of those wounds. The recumbent posture, with the slight changes in position required in voiding urine and fæces, is well adapted for drainage.

(3) Douching does not lessen the dangers accruing from the presence of bacteria in the vagina. This is probably the most difficult contention to prove definitely. Do destructive organisms ever exist in the vagina after labor? Undoubtedly, yes. In some cases cocci of various kinds are present in varying numbers. The recent investigations of Doederlein, Winter, Steffek, Koenig, and others, confirm the opinions of former observers as to the occasional, if not frequent, presence of pathogenic micrococci in the vaginal secretions after labor. It is generally agreed, however, that in normal cases the vaginal mucus is strongly acid. The acidity is produced by innocuous organisms which have their habitat in the healthy vagina. It happens that these organisms have some restraining, if not destructive, effect on the pathogenic cocci. Vaginal antiseptic injections may interfere with this normal acidity, and thus chemically lessen the resistance of the tissues to bacteria. Taking these views as correct, we learn that nature has provided a secretion in the vagina which prevents the wicked organisms from doing any harm; and such being the case, douching is at least useless.

(4) Douching is actually dangerous. I have already alluded to certain of these dangers, especially from a surgical standpoint. It is apt to disturb clots, and thus open avenues for infection; to open lacerations of the cervix and vagina, and thus prevent them from healing; to wash bacteria into the uterine cavity, and thus cause septic endometritis. Among other dangers which are generally due to accident or carelessness are the introduction of septic matter by fingers and instruments. Some mention other rare or minor dangers which I will not refer to in this paper.

Many of the arguments thus far advanced are, to a certain extent, theoretical; and in connection therewith the results of clinical experience ought to assist us materially in arriving at correct conclusions. Fortunately, statistics prove beyond the possibility of doubt that the results of our modern methods, whether with or without douching, are vastly better than those of the pre-antiseptic era. The fearful mortality rates of five to ten per cent., or even more, have been reduced to about one-half of one per cent., or less, in all our well-ordered maternity hospitals, both in the old and the new world. As far as I can learn, the weight of evidence goes to show that the hospitals in which the routine douching is not practised have better results. Baruch, of New York, published a table, from which it appeared that in the following hospitals where the douche was in use—Charité, Parma Maternity, and Glasgow Maternity—the mortality ranged from 1.5 to 3.42 per cent., while in the Tarnier Maternity, Paris, Prague Maternity, Copenhagen Maternity, and New York Maternity, where the douche was not in use as routine practice, the mortality ranged from 0 to .56 per cent. (*New York Medical Journal*, March 22, 1894.)

It will be seen by this that one maternity (the Parma) had the high mortality of 3.42 per cent. Now, although I am not partial to douching, I do not for one moment suppose that the bad results at Parma were due to this practice alone or chiefly. There must have been other elements at work.

More recent reports prove conclusively that the mortality rate may be brought down to .5 per cent., or less, whether douches be used or not. From one of Boxall's papers we learn that the mortality in the London Lying-in Hospital, for five years previous to 1890, was only .418 per cent., the number of patients treated being 2,150. Vaginal douching was done as a routine measure twice a day during the puerperium.

I am very strongly impressed, however, with the opinion that the use of the douche does sometimes, if not frequently, cause a rise of temperature which must, of course, be considered an evil. During the period referred to by Boxall, when the death rate was .418 per cent., the labors followed by fevers from all causes amounted to 40.65 per cent. In a number of maternities on the Continent where no douching is done, the percentage of febrile complications ranges from 6 to 10 per cent. Leopold has compared the two methods in Dresden with the following results: Of 2,388 deliveries with injections, 17.2 per cent. had fever; of 1,136 deliveries with vaginal washings, 20 per cent. had fever; of 1,123 deliveries with no injection at all, only 9.7 per cent. had fever (*Medical News*, Feb. 14th, 1891).

In all these cases similar antiseptic precautions were applied to everything which approached the patient, but in the latter series there was no interference with the parturient tract. In comparing the second with the third set of cases, it will be seen that in 1,000 cases 200 had fever after deliveries with injections and vaginal washings; while in the same number only 97 had fever when no injections had been employed.

In considering the statistics from modernized maternity hospitals, I think it important to keep in mind the fact that the injections are administered with care and skill. In private practice they are frequently given in a careless and slovenly way, notwithstanding conscientious efforts on the part of the accoucheur to guard against such faulty work. A large proportion (more than half, I think) of our nurses do not know how to administer a vaginal douche properly. If you will admit, for the sake of argument, if not absolutely, that Leopold's results show that skilful antiseptic vaginal douching is not only useless, but actually dangerous, then I think it follows as a logical conclusion that indiscriminate douching by good, bad, or indifferent nurses, such as are placed at our disposal in private midwifery, is dangerous in a still greater degree.

Such is my opinion at the present time, and such it has been for many

years, but I would hesitate to say it is final or unalterable. I have not yet reached that happy state when I feel that I know all that is worth knowing about antiseptic or aseptic midwifery. It is a subject which does not grow old with me; in fact, it is ever new. I am as anxious now as I ever was to learn something new about antiseptic and aseptic methods, to adhere religiously to what I consider the best rules, in both private and hospital practice, and to do what I can to teach others, especially my students, how to avoid preventable maiming and preventable death. I am not sorry this question is still unsettled; I think it exceedingly fortunate that we are able to get from time to time such valuable and accurate reports from the various large maternities, and hope we may, in the near future, get still more light on a subject of such vast importance from a humane as well as a professional point of view.

HISTORY OF TWO CASES OF SECONDARY HÆMORRHAGE
AND ONE OF DELAYED HÆMORRHAGE FOLLOWING TONSILLOTOMY.*

BY PRICE-BROWN, M.D.,

TORONTO.

CASE I. On June 2nd, 1893, Mr. C., æt. 22 years, a second-year medical student, presented himself for treatment for hypertrophy of tonsils. He was stoutly built, and florid in complexion. His voice was thick and indistinct, and throat catarrhal. Though not very prominent, both tonsils were enlarged, extending low down into the pharynx. The crypts were wide, and lined with muco-pus. As a result of the tonsillar condition, the patient was subject to frequent attacks of soreness of throat, attended by hoarseness.

In this case I would have preferred to operate with the galvanocautery. The man's time, however, was limited, and, in order to allow him to return home to Princeton on the following day, I decided to operate with the tonsillotome. I considered myself justified in doing so for two reasons:

(1) That I had never met with hæmorrhage of a severe character, either primary or secondary.

(2) That the old idea of the possibility of wounding the internal carotid artery by tonsillotomy has been demonstrated by Heryng and Linhart to be incorrect, the vessel being situated behind the posterior pillar instead of external to the tonsil.

Accordingly, after applying a solution of cocaine, I removed the tonsils at one sitting, with two of Mathieu's tonsillotomes, using the larger instrument for the larger growth. In each case I had to press the instrument well into position to insure a sufficient hold for the needles. At the time there was but a moderate amount of bleeding. He called to see me the next morning on his way to the train, and, from the appearance of the parts, I saw no reason for objecting to his immediate return home.

Five days later he was attacked by hæmorrhage. I will quote his own words, from a letter to me upon the subject. He says:

"The hæmorrhage was the result of my carelessness. It was due to heavy lifting and, at the same time, stooping over. What I was working

*Read before the Toronto Medical Society, November 22nd, 1894.

at was laying sods. The blood would flow quite freely from both tonsils, and, when I had sat down for half an hour, it would partially cease. The blood, I think, was arterial, and there would be quite a throbbing in the throat on both sides during the bleeding. I gargled my throat with tincture of iron clear. That would check it for about fifteen minutes. I kept repeating the iron for about three hours. After that they bled very little, but continued throughout the day. The next day they had entirely ceased, and have felt quite well ever since."

CASE 2. On July 11th, 1893, at 4 p.m., Dr. M. brought his son, æt. 6 years, to have his tonsils removed. The boy was medium in size, not very robust, and a mouth breather. After applying cocaine I performed double tonsillotomy with two of Mathieu's smaller instruments. As in the former case, hæmorrhage was only moderate. I did not see the boy again until 4 a.m. of the 16th, four and a half days later, when the doctor summoned me to the house. Hæmorrhage had commenced during sleep an hour earlier. It was arterial, but not severe. The position in which the patient lay was somewhat suggestive, as he was coiled up on his left side, with his head lying low upon the bed, and without a pillow. The blood had run out of the mouth from the lower tonsil, and had covered a patch five or six inches broad, soaking through the cover into the mattress beneath.

When I arrived bleeding had ceased, but soon commenced again. Slight pulsation could be noticed as the blood issued from between the pillars. Dipping a cotton pledget into a strong solution of tannic acid, I pressed it with curved forceps on to the bleeding surface. In a few minutes the hæmorrhage ceased, and did not recur again.

CASE 3. September 22nd, 1894. Mr. A.R., Frenchman, moulder by trade, was operated upon by me for hypertrophied tonsils. Under cocaine, I removed the right one by tonsillotome, and operated upon left by galvano-cautery, at the one sitting. The right tonsil bled moderately, the left not at all. He did not suffer from the cocaine to any unusual extent, and a short time after the operation left the office. Two hours later I received a telephone message that he had bled nearly a quart, and was getting faint.

On arriving, I found a large clot filling the right tonsillar cavity, and blood oozing from beneath its margins. I at once removed the clot, and after drying the throat as much as possible with absorbent cotton applied pure tincture of iron to the bleeding surface. In a short time the bleeding ceased, the subsequent oozing being very slight. That the hæmorrhage was not of very serious moment is proved by the fact that, although the operation was performed on Saturday afternoon, the man was able to resume his work on Monday morning without the loss of an hour's time.

Although on the whole dissimilar, there are several points in which the first two cases are somewhat alike. In both the excisions were clean cuts, extending down to the bases of the tonsils. In both the intervals between ablation and secondary hæmorrhage were about the same, being, respectively, five and four and a half days, the period being that required for the slight traumatic slough to reach the point of separation. Although the one patient was a strong, plethoric adult, the hæmorrhage arising during active exercise, and the other an anæmic child, the bleeding occurring during sleep, yet the exciting cause might be alike in each. In the first, the exercise and posture increased the arterial tension in the pharynx. In the second, gravitation produced the like result, the head being low, and the bleeding from the side upon which the child was lying. In both the absence of tonsillar resistance facilitated the rupture of the minute arteries.

In the third case there was nothing remarkable. It was merely one more added to the list of those in which hæmorrhage occurs a few hours after operation—a rule rarely broken where bleeding occurs in adult life.

In referring to the literature upon the subject of hæmorrhage after tonsillotomy, I find that Bosworth, in the second volume of his late work on "Diseases of Nose and Throat," gives a detailed account of all the cases of secondary hæmorrhage reported up to that date. They number about fifty cases. All of them occurred in adults except one related by Capart. This was in a child eight years old. The tonsil had been removed by galvano-cautery loop, and was followed immediately by hæmorrhage, which lasted five days. The case was considered unique, and it was thought that the persistent bleeding might be owing to injury of the faucial pillars.

In all the other cases, with three or four exceptions, hæmorrhage occurred either immediately after or within a few hours of operation. It was, as a rule, easily controlled, though sometimes it took many hours to check the bleeding. In Fuller's case, all other means failing, the common carotid artery was tied. Even this did not stop the flow of blood. Three hours later the bleeding stopped spontaneously. In St. Yves' case hæmorrhage came on four days after operation.

Thorner, of Cincinnati, reports three cases, all occurring in one family, two of them two days after operation.

Hunter Mackenzie, in *British Medical Journal*, 1893, gives an analysis of 230 tonsillotomies. In only one of them did he have secondary hæmorrhage. This was in an adult, occurring on the second day.

Jessop, in *British Medical Journal*, June, 1893, reports a case of a delicate female child, æt. 10 years. The bleeding commenced four days after operation. By giving ice to suck, and keeping recumbent posture,

the bleeding stopped. It recurred, however, thirty-six hours later, in more alarming character. It was finally stopped by clearing out the clots from the tonsillar cavity and rubbing in perchloride of iron.

Santi, in London *Lancet*, March, 1894, reports three cases ; like the rest quoted, all occurring early after operation, and all in adult life.

In summing up, the full number of recorded cases I have been able to find, including those presented to-night, is about 64. Of these, three were children, aged respectively six, eight, and ten years. In two of them hæmorrhage did not occur until four and four and a half days after operation. In the other, although commencing early, it did not cease until five days after excision of the tonsil.

In 61 cases they were all adults ; and, with three or four exceptions, the hæmorrhage occurred, at the outside, within two days after tonsillotomy. In the exceptional cases the hæmorrhage could be traced individually to over-exertion of one form or another.

Granting, of course, that the surgeon can have a judicious oversight over his cases, the lessons taught seem to me to be :

(1) That tonsillotomy is a safe operation, whenever necessary, irrespective of the age of the patient.

(2) That in young children the period requiring the greatest care after operation is between the third and the sixth days.

(3) That in adults, after operation, the patient should be kept under observation for from thirty-six to forty-eight hours, subsequent to which time a warning against possible contingencies may be all that will be required.

SPRAINS AND THEIR APPROPRIATE TREATMENT.*

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THE subject of my paper may appear to be one possessing little interest. Current medical literature provides us with very few articles on sprains, and from this fact we might be justified in concluding that either the subject has been neglected, or—in consequence of the fact that the class of injuries to which I refer appear to present very little variety—there is, apparently, no field for much discussion, and few cases of sufficient interest to warrant a clinical report.

From the experience I have had in the treatment of old sprains and badly-treated sprains, I think I am warranted in concluding that the subject *is* neglected, and, if we had more discussion concerning these injuries and their appropriate treatment, we would possibly see less of the misery which is entailed by the injudicious treatment of recent sprains.

In estimating the amount of damage done to an injured articulation, and in considering the best method of restoring its usefulness, it is essential that we should have a clear conception of the joint structure and its function. It is impossible for me to describe the individual joints of the body in this paper, and it would serve no useful purpose to do so, but there are some general considerations which are of value.

We have entering into the formation of the ankle-joint, for instance, the bones, with their coating of articular cartilage; the ligaments which unite the bones; the synovial membrane (which secretes the fluid synovia) lining the ligaments; in addition to these structures, which form the joint proper, we have the muscles acting upon and closely related to the joint. We have also to consider the connective tissue about the joint, with the blood vessels and nerves.

It has been stated that the strength of a joint depends mainly upon one or more of three factors. These are: (1) The shape of the bones; (2) the strength of the ligaments; (3) the support of the muscles. It may have all three elements strengthening it. The hip-joint, for instance,

* Read before the Ontario Medical Association.

possesses great osseous strength, the spherical head of the femur fitting into the deep acetabulum. It is ligamentously strong also, the cotyloid ligament still further deepening the acetabular cavity, and special thickenings of the capsular ligament affording powerful support. The muscles closely surrounding the joint also strengthen it. Compare the shoulder-joint with this. Here we have an enlarged head of the humerus and a very shallow glenoid fossa. The joint is osseously weak. The bones do not fit together, and there is no locking. The ligaments are only fairly developed, but the muscular strength of the joint is great; *e.g.*, the biceps tendon, the supra-spinatus, infra-spinatus, subscapularis, and triceps, with the deltoid. All these impart great strength to the shoulder-joint. The acromio-clavicular joint is osseously weak and muscularly weak: it is a typical example of a ligamentously strong joint. There is great osseous strength in the joint between the ulna and humerus, the coronoid and olecranon processes fitting into their respective fossæ, in the humerus. The wrist and the ankle-joints resemble one another very closely in that they are dependent mainly upon ligamentous strength and the close association of the tendons of muscles passing in close contact with the ligaments.

Roughly speaking, we may say that, in severe injuries, dislocation is the rule in joints that are muscularly strong, and that a sprain is more likely to result from an injury in joints whose integrity depends upon the shape of the bones and the strength of the ligaments. The reason for this is obvious, namely, that the muscles may be taken at a disadvantage; if they fail to contract when the joint is forcibly wrenched, the joint is unprotected and dislocation is likely to occur, the bones being widely separated and maintaining their abnormal relations. The ligaments are not strong enough to prevent this. In the shoulder-joints examples of this are common. The powerful action of the muscles in this neighborhood is readily demonstrated if one attempts to reduce a dislocated shoulder in a muscular man, and compares the ease with which reduction of such a dislocation is accomplished if we eliminate the action of the muscles by putting the patient deeply under an anæsthetic. Contrast the condition of affairs in the ankle-joint. Here we have osseous or ligamentous strength, whilst the muscles impart little or no support. Consequently, a severe wrench in this neighborhood is not so likely to cause a dislocation, but a sprain, in which we have laceration of the ligaments to a greater or lesser extent.

I am aware that the two classes of injuries I am contrasting here are closely allied, and that a sprain may correctly be looked upon as a "temporary dislocation," and, on the other hand, we cannot have a true dislocation without laceration of the ligaments. Further, the ankle-joint may be the seat of a true dislocation, or the shoulder may be simply sprained, but

the point I wish to emphasize by the considerations I have brought before you is that, in the majority of cases in which we are called upon to treat a severe sprain, we have to deal with joints possessing powerful and extensive ligamentous connections, and, consequently, the laceration of tissue—the extent of the subcutaneous wound—is, in such cases, very considerable. The actual amount of tearing in the majority of severe sprains, in joints ligamentously strong, is very much greater than the laceration in many dislocations of joints depending for their strength upon muscles. Thus it is possible to imagine a much more extensive wound in an ankle severely sprained than that existing in a subcoracoid dislocation of the shoulder.

Of course the amount of laceration of the ligaments varies widely. The injury may be very slight, and the ligaments possibly bruised only. It is usually extremely difficult to estimate accurately the actual amount of damage done.

The synovial membrane is not, as a rule, opened, but in severe injuries the joint cavity may be opened up, and will, in many such cases, freely communicate with the cellular tissue outside the articulation.

The muscular structures about a joint are injured to a varying degree. The amount of damage is often dependent upon the degree of activity and consequent tension on the muscle fibres at the time of the accident. Tendons form most intimate relations with certain joints; thus we have tendons passing in contact with the ankle and the wrist joints. In these localities the effect of the injury upon the tendons must be very closely studied. It is extremely rare to have a rupture of the tendon, but what we do have is a laceration of the tendon sheath with its synovial lining.

One of the most striking features of a sprain is the swelling consequent upon the injury. This swelling is primarily due to hæmorrhage. Blood vessels are torn, and blood is poured out. At a later period there is effusion of lymph, which is accountable also for the tumor. It is remarkable how quickly swelling occurs. I had an excellent opportunity a short time ago of observing this fact. I was standing in the corridor of the Children's Hospital when one of the nurses slipped from the topmost step of the stairs leading from the floor above. She tumbled down the whole flight of steps, and complained of having injured her right ankle. I had the boot and stocking removed at once, but, by the time I had the joint exposed, there already existed a fluctuating swelling of great extent on the inner and outer sides of the ankle-joint. This was due wholly to fluid blood which had been poured out of the torn blood vessels.

If we sum up now the possible results of severe sprain in damaging the tissues in and about a joint, we would indicate them thus :

Laceration of ligaments.

Tearing of synovial membrane.

Rupture of the tendon sheath and its synovial lining—possibly dislocation of the tendon.

Damage to the cellular tissue about the joint involving rupture of blood vessels, and in consequence the extravasation of blood.

These possibilities must always be borne in mind when we are called upon to treat a sprain. In many cases all the structures are injured, but the degree of damage varies with the severity of the injury. These remarks apply to all joints, but we occasionally have to deal with individual peculiarities in joint structure which modify the conditions. Thus an inter-articular fibro-cartilage may become dislocated, or bursæ in the neighborhood of certain joints are often damaged very considerably.

The subsequent course of a sprain may be briefly pictured as follows : The swelling tends to increase by the outpouring of lymph, and with this swelling pressure on the nerves causes increased pain. The effused blood and lymph tend to organize, and the tissues become firm and inelastic, unless the effused material is rapidly absorbed. After a time the repair of the torn tissues is accomplished, and whether this is brought about in such a manner as to restore the normal functions of the joint or not depends very much on the treatment adopted.

Injudicious treatment is likely to bring about a condition in which, in consequence of non-absorption of effused material, the blood and lymph organize in the cellular tissue, and this becomes inelastic and unyielding. Further adhesions are produced where laceration of the ligaments has occurred. Then, again, the tendons become firmly adherent to their synovial sheaths. We have, in fact, the condition of affairs which produces the stiff, painful, and misshaped joint, which is so often the result of injudicious treatment.

Clearly, the things to aim at in our treatment are : (1) Early absorption of effused material. (2) The prevention of adhesions. If we can attain this, we will have a complete cure.

One of my chief objects in writing this paper is to call attention to the value of pressure in the treatment of a recent sprain. The suggestion is a very old one, but nevertheless the excellent results to be obtained by this method of treatment are not recognized, excepting, perhaps, by a surgeon who may see many cases of severe sprain, and who, in consequence of the unfortunate results often obtained from injudicious treatment, has come to study carefully the comparative values of the various regulation methods.

Let me explain at once what I mean by pressure properly applied. Imagine we are dealing with an ankle severely sprained. We have examined the joint and determined, as nearly as possible, the extent of the injury. The foot is placed at a right angle (or, if possible, less than a right angle) with the leg. Cotton-wool (ordinary cotton batting is the

best) is applied evenly over the foot from the toes upwards to the middle of the leg. The amount of wool must be considerable. Loosely applied, it should be fully three inches in depth, so that, upon the application of our bandage, it is about one-third of that thickness. Now apply the bandage from the toes up, and draw the bandage as tight as we can draw it. It is all-important that the bandage should be put on as firmly as we can apply it, otherwise we will do little good. There is no danger of making too much pressure, provided we have sufficient cotton-wool. You may imagine that your patient will object, and will suffer pain. I had occasion only yesterday to disprove this. A girl sprained her ankle late in the evening. The pain was severe, and she did not sleep all night. I saw her in the morning, and at once applied pressure. The moment I finished bandaging the limb my patient informed me that she was absolutely free of pain.

You may rightly ask how I account for this disappearance of pain. Well, the pain is due more to the congestion and dilated condition of the vessels than to the pressure of effused material. The "throbbing" character of the pain would indicate this. Our pressure affords support to the blood vessels; they are no longer dilated. The circulation goes on normally. Eventually this restoration of the normal circulation tends to the reabsorption of effused material, and the swelling disappears. A surgeon who has never tried this method of treatment is greatly surprised with the rapidity with which the swelling goes down.

But our pressure does more than diminish swelling and ease the pain. It keeps the parts at rest. I have already had the opportunity of calling attention to the value of cotton-wool as a splint, if applied in large quantities under a firm bandage. In a paper read before the Clinical Society I referred to this in connection with a case of excision of the elbow-joint where it had been applied. It proves a most efficient splint, and we thus secure rest, a matter of primary importance in the treatment of all injuries. I have tried plaster of Paris over the wool as a means of obtaining absolute fixation in sprained ankle, but I believe it to be quite unnecessary.

By our pressure and rest, then, we attain two most important results :

- (1) Restoration of the normal circulation.
- (2) Absorption of blood and lymph.

This treatment must not be continued unmodified for too lengthened a period, else we will have a stiff joint from the formation of adhesions. The absorption of effusion undoubtedly does away with one of the conditions so frequently responsible for stiffness, but adhesions may form, and, therefore, early passive movement is imperative. We must remove our bandage and wool at the end of a few days—a week, at the longest—and

carefully conduct passive movement in all the normal directions. Then immediately reapply the pressure to prevent further effusion. As a rule, in ten days or a fortnight—varying with the degree of severity of the injury—the cotton-wool may be dispensed with, and the support of an ordinary flannel roller will be sufficient. In the majority of cases of severe sprain, the individual may be able to use the injured joint for ordinary purposes after the lapse of three weeks.

There are just one or two points to which I wish to refer: (1) A bandage alone without the wool is absolutely harmful; it causes unequal pressure, and injurious pressure on the bony prominences, whilst the depressions receive no support at all. (2) Bandage always from the toes or fingers up, else we will have swelling, discomfort, and actual damage done below the injury.

I do not overlook the value of massage in the treatment of a sprain, but the limited time at my disposal prevents my discussing it. In sprains of slight severity massage may be begun at once with excellent results; and in old sprains massage is by far the most appropriate treatment, and is, in my opinion, indispensable in order to effect a cure.

Heat and cold are, in my estimation, merely temporary methods of relieving congestion, and, whilst they undoubtedly do good for a limited time, they as surely do harm if employed too long. The blood vessels at first contract, but subsequently they cease to respond to the stimulus. Therefore I seldom employ hot and cold water or evaporating lotions in sprained joints.

Neglect to ensure early movement is, undoubtedly, accountable for many cases of stiff joints. This applies to fractures near joints as well as to simple sprains, because the injury to cellular tissue, the organization of effused material, and the adhesions of tendons within their sheaths are apt to result if the joint is kept too long at rest. I need only remind you of the importance of early movement after a Colles' fracture at the wrist or after a Pott's fracture at the ankle to make the point clear. A short time ago a patient, an old lady, was sent to me, who had suffered from a Colles' fracture eight weeks previously. She had worn splints for a month with absolute fixation, and had had very little, if any, movement up to the time she came into my hands. I endeavored to restore the functions of the joint by breaking down adhesions under chloroform, but I failed to do her much good, and she has a joint practically useless. The treatment to which she was primarily subjected was sufficient to account for the sad result.

In many cases of old sprains, particularly in young people and in those who are willing to endure a considerable amount of pain, and who will persevere in carrying out one's instructions, a great deal may be accomplished by breaking down the adhesions under chloroform and subsequent

passive movement and massage. As examples of this treatment and its results, I may refer to two cases which came under my care. With the narrative of the clinical features of these cases I shall close my paper.

CASE 1. M.H., æt. 51, laborer, came under my care with the history that nine months previously he was thrown violently upon his shoulder whilst driving a team of horses. Pain and limitation of movement resulted. For some months he applied liniments, which had been ordered for him, but he received no benefit. Six months after the injury he was told by a medical man that he had disease of the bone, and shortly afterwards he was informed by another professional man that his shoulder had been dislocated. When I saw him nine months after the injury the shoulder presented a perfectly normal appearance. There was no swelling, no redness, and no muscular wasting. The bony prominences were normal in their relation to one another. The patient complained of pain only when the joint was moved; he referred the pain more particularly to the region of the acromio-clavicular joint. He occasionally suffered from a dull aching pain down the biceps and through the shoulder. Movement at the joint was very considerably restricted; there was little or no rotatory movement possible, and the arm could not be carried above the head; forward and backward movement was very limited. The man was healthy, and no family or personal history of tubercular disease. I diagnosed the case as one in which stiffness of the joint had followed traumatism in consequence of the formation of adhesions. Chloroform was administered and the shoulder girdle was firmly fixed by an assistant, whilst movement was carried out passively at the shoulder-joint. On flexing the elbow, and using the forearm as a lever, rotation outwards was performed. A number of adhesions gave way with an audible tear. This was accomplished without undue force. The various movements were carried out, and very free action, indeed, obtained. Subsequently, the arm was kept at rest for a few days, and evaporating lotions applied. After forty-eight hours passive movement was begun, and the patient encouraged to use his arm. He carried heavy articles about, and practised on a horizontal bar, supporting his weight with his arms raised above his head. Three weeks after the operation he expressed himself as being free of all pain, and the extent of movement at the joint was practically normal.

CASE 2. Miss M., æt. 21, was referred to me for treatment six months after an injury to the right ankle. At the time of the accident she was jumping over a rail fence in the country. Her right foot caught in the topmost rail and she twisted it severely. The doctor who saw her treated the injury by placing the foot in plaster of Paris, and keeping it there for two weeks. The foot swelled very much subsequently, and became very painful. The circulation in the foot subsequent to the injury was much

impaired, the part remaining cold and clammy. There was no pain except on movement, when it was considerable. Shortly before coming to me she had been treated by a doctor, who rubbed in ichthyol ointment. The circulation improved somewhat under this treatment, but she was quite unable to bear her weight on the foot. In fact, up to the time she came under my care (six months after the injury), she had been unable to use the foot in walking. There was no history of tubercular disease in the family. The girl seemed strong and of robust constitution. Measurement showed increase of the circumferences of the injured foot, whilst the circumferences around the calf muscles were diminished one and a half inches, this being an evidence of considerable muscular atrophy. Considerable pain was caused by manipulation of the foot, and this was chiefly localized in the region of the mid-tarsal joint. My impression at the time of examination was that the foot had been caught at the time of the accident just across the dorsum, and that there had been a severe sprain in the region of the mid-tarsal joint with some laceration of the ligaments, and some bruising and tearing of the tendons on the dorsum of the foot. There had, undoubtedly, been considerable effusion into the joint, the tendon sheath, and the cellular tissue.

Chloroform was administered, and forcible manipulation caused many adhesions to give way, the tearing being audible to all in the room. The foot was then treated as a recent sprain. Pressure was applied very firmly over cotton-wool. After two days passive movement was attempted, but the pain caused was very severe. A splint was applied with extension in such a way as to flex the foot to a right angle with the leg. It had previously been fixed in an extended position. The splint was continued for two days, and then removed. Passive movement was now freely carried out, and with much less pain than previously. The subsequent treatment consisted in the employment of massage and passive movement. She gradually lost all pain, and the movement became free, so that, eventually, the normal functions of the joint were wholly restored.

Selected Articles.

A PLEA FOR THE EXCISION OF THE INITIAL LESION.*

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EXCISION of the initial lesion as an *abortive* measure has been practised at irregular intervals since 1693, when M. Corbis, of Lille, first excised the sore, contending that the poison had not yet entered the system. Since that time some surgeons have followed his lead, but many more have opposed the treatment. Each advocate of excision has had an idea of aborting the disease, but no one, so far as I know, has advocated the procedure as a method of treatment to lessen the secondary symptoms. I hope to show that by early excision of the initial lesion the disease may be aborted, and by excision in the later stages the secondary symptoms can be moderated.

I am very sorry to disagree with any opinion expressed by my friend, Dr. R. W. Taylor, but I can hardly accept his explanation of the matter as laid down in a very elaborate paper entitled, "Why Syphilis is not Aborted by the Destruction or Excision of the Initial Lesion."† In this paper two particular cases are referred to, and conclusions are drawn from the pathologic condition as demonstrated, but we are not justified in assuming that these conditions existed in an earlier stage of the disease. That would have to be actually demonstrated before an argument could be based on their existence. Again, the condition demonstrated must be constant, and have some particular relation to the dispute in question. If the identical condition can be demonstrated in other diseases, then no conclusions of a positive nature, attributed to one disease, are justifiable. Dr. Taylor concludes from the microscopic appearance in these two cases—one of a chancre of about four days' and the other of ten days' exist-

*Read before the American Association of Genito-Urinary Surgeons, at Washington, May 31, 1894.

†*Medical Record*, July 4, 1891.

ence—that it is owing to the rapid infiltration with leucocytes of the peri-vascular spaces and tissues immediately surrounding the blood vessels. (Figs. 1 and 2.) I quote from his article :

“The point deserving of attention in the first case is the extremely early and far-extending involvement of the blood vessels ; although the primary sore in the first case is but of a few days' duration and very small, and under the microscope is of such limited and circumscribed extent, the blood vessels are very extensively surrounded by cell investment, at a considerable distance from the ulcer. The microscope shows *how very deeply rooted syphilis is at the beginning of the sore by having propagated itself along the peri-vascular lymph spaces, and how futile it is, as experience has already shown, to attempt to stay syphilis by excising the primary sore. Apparently, judging from the appearance of the vessels in this case, their involvement begins before the appearance of the sore.*”*

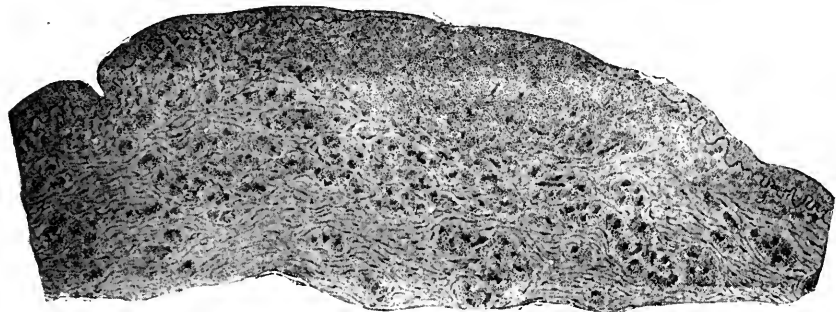


Fig. 1.—Showing the chancre (at the right upper part) and small vessels, with the coat-sleeve arrangement of the cell-infiltration in the deep connective tissue under and beyond the chancre. (Vessels represented by black dots.) [Taken from lithograph illustrating Dr. Taylor's article in the *Medical Record*, July 4th, 1891.]

In the foregoing paragraph no consideration is given to inflammatory change, or to the irritating effect from the development of a toxine at the site of the lesion. We know from bacteriologic studies that an infiltration of leucocytes is found in the tissues in about two hours (or less) after an irritating poison has been applied. This infiltration of leucocytes is all that has been demonstrated here. We are asked to look upon these as the poison of syphilis, but we can hardly do that. Some other conditions must be demonstrated ; for instance, a specific bacillus in this tissue. I have here a section made from a chancroid, removed on the second day after its development, which presents identically the same appearance as that described by Dr. Taylor. (See Fig. 3.) I shall quote one paragraph from his paper that will be an excellent description of my specimen :

“This change in the blood vessels consists in the distension of the peri-vascular spaces with small, round cells. Nearly every vessel in the

*Italics are mine.

section, both artery and vein, is in this way enveloped by masses of small, round cells, forming a sheath, like a coat sleeve around the arm. . . . Besides this condition of the peri-vascular spaces, there is a change in the endothelial cells lining the arteries and veins. The endothelial cells are swollen, and seem to be proliferating."

I shall quote one more paragraph from Dr. Taylor's article :

"These studies, therefore, go to show that in the very first days of syphilitic infection, as shown by the chancre after the first period of incubation, the poison is deeply rooted beneath the initial lesion, and that

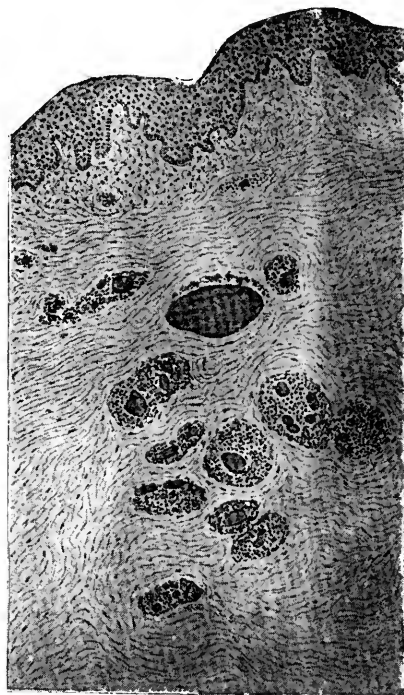


Fig. 2.—Showing coat-sleeve arrangement of the cell-infiltration in the skin, far away from the chancre, which to the eye looks healthy. (Vessels represented by black dots.) [Taken from lithograph illustrating Dr. Taylor's article in the *Medical Record*, July 4th, 1891.]

it extends far beyond it; that it is in a most active state, and running along the course of the vessels it soon affects all the parts beyond, even to the root of the penis. These studies seem to warrant the conclusions that the virus is not localized at the point of entry, and that it does not shut itself in by throwing out a dense wall of circumvallation which, later on, disappears and allows the exudation of the morbid products of the heretofore supposed closed in morbid focus."

Here, again, the infiltration is pointed to as the syphilitic poison. From the conditions found in and surrounding the chancres, Dr. Taylor concludes that the poison is not localized in the sore. Certainly not, after a certain amount of the poison has entered the circulation, but this localized sore is a reservoir from which new poison is continuously poured into the system until the induration becomes entirely absorbed. The paper really strengthens the case of those who advise excision at any stage.

CASE 1. J.M., twenty-three years old, presented a chancre that developed twenty-two days after intercourse. He was treated by a druggist, who told him the matter was only trivial. The ulcer was very slow in healing. About six weeks after the man noticed the sore, and before it



Fig. 3.—From a section of chancroid, showing coat-sleeve arrangement around the vessels and general infiltration of the tissue with leucocytes.

had healed, a rash appeared on his body. When he consulted me the chancre was one inch by one-half inch in size, and presented marked induration. The adenitis was excessive and very painful. The rash was general and very profuse. I excised the lesion at once, and the wound healed by first intention. The adenitis began to subside within thirty-six hours, and a marked change took place in the rash within seventy-two hours. I now placed the man upon specific treatment; the sequelæ were few and easily controlled. The first improvement I attributed to the removal of the cause of irritation, and the second to the cutting off of the supply of germs.

While the specific microbe of syphilis has not yet been isolated, it is almost beyond doubt that syphilis is caused by a specific germ. Although

Lustgarten, Zeissl, Klebs, Doutrelepont, Schultz, and others, have all isolated bacilli, yet none has stood the test of further research, and, therefore, we cannot claim to know their absolute importance as a factor in the causation of the disease. The very long period of incubation of the disease and the peculiarity of soil necessary for the cultivation of the bacillus appear to be the most important difficulties in isolating the organism. In the light of recent researches, however, we are justified in arguing from the standpoint of a specific syphilitic germ.

In all germ diseases there is a period of incubation of variable length. In a good many the effect of the germs is self-limited, whilst in others it is continuous. In all forms of these diseases it is necessary that the poison shall be administered or planted in a soil suitable for the propagation of the germs. That mild cases of these diseases occur proves either that a smaller dose of the germs was administered, or that the soil was not properly suitable for their growth, or that both of these conditions existed together. In all cases we have a period of incubation, a period of exacerbation, and a period of recrudescence.

In the milder exanthemata the organism must grow rapidly, and the return to health is unusually rapid. The introduction of the poison into the system is by a different route, we admit, and this illustrates the "one-dose-of-poison" principle. In syphilis this order of things is materially changed, and we observe a longer period of incubation, a greater time again before exacerbation or the manifestation of systemic infection, and a still greater period to exterminate the poison by nature, if, indeed, that is at all possible—which I doubt. Here we have the germ (?) introduced through a broken service, developing at the very point of introduction; this I believe to be capable of administering to the system, not *one dose* only, but many continuous doses of the poison.

The intensity of secondary syphilis has been held to be in direct proportion to the extent of the initial lesion. This I have corroborated, and I have further demonstrated, clearly to myself, that it is also in direct proportion to the time that the initial lesion has existed. This, it appears to me, demonstrates that it is in direct proportion to the quantity of germs introduced and the poisonous toxine generated by their growing in the system. I do not look upon the adenitis, as it appears during the continuance of the chancre, as due solely to the syphilitic poison, but to a double cause—the syphilitic germ plus an inflammatory condition due to the toxine; this is shown by the case here related, in which a subsidence occurred immediately on the removal of the sore.

I do not think that it is possible by any known means to abort the disease, once the germs in sufficient quantity have entered the general system; but I believe the course can be greatly modified by limiting the

amount of the poison entering the economy. By early and free excision, the fewest possible number of germs are allowed to enter the system. In this way medical (or internal) treatment will have less to control.

Excision has been useful in other diseases in which fatal results follow the introduction of a poison, when neglected. The bite of the cobra has, by excision, been prevented from proving fatal. The excision must be practised early and freely to be successful. The effects of rabies have been prevented by free and early excision. Cauterization does not always produce the desired result. Here we are starting a new inflammation, and unless every germ is destroyed the cauterization is useless. We are producing a very suitable soil for these germs to propagate in. The same may be said of cauterizing the wound after excision, unless it be done with, say, pure carbolic acid, which does not prevent primary union.

We should excise freely and bring the edges together, and expect union by first intention. In these cases I believe that undoubtedly some poison must have entered the system, but not sufficient to be a dangerous dose. We have been shown by Biondi, Senn, Watson Cheyne, Hauser, and others, that there is a minimum dose of microbes necessary to produce systemic effects. Small doses produce no effect, and larger ones produce a greater and more rapid effect. Why not the same with syphilis?

The entire ablation of any localized diseased area is a sound surgical procedure. In these days of antiseptic and aseptic surgery, it is the duty of every surgeon to render all diseased areas as nearly as possible aseptic. When excision is impossible, it is likely that free scraping may be practised and the same result attained. The free and early excision of the chancre changes an infected area into a healthy one, and removes a reservoir of growing germs that would otherwise have to pass through the entire economy. In a very short time after the chancre has cicatrized we observe the inguinal adenitis gradually subside until it attains the characteristic bullet-like hardness, and as the induration melts away this hardness also disappears, until we have left only a slight enlargement as compared with that in the first stage.

I wish it to be distinctly understood that I am not advocating the excision of chancres at all stages as an abortive measure, but as a means of lessening the systemic effects. I say again, if it is possible to see the lesion during the first few hours of its existence and to at once excise it, the disease may be aborted. Even with the ameliorating results, I do not allow my patients to be careless about internal treatment. I tell them that the treatment must be thorough, but I feel justified in assuring them that secondary results will be fewer in number and less severe in character as a consequence of the incision, and I encourage a hope that they may not appear.

I shall now report a case in which I think the disease was aborted.

CASE 2. J. McK. consulted me June 18, 1893. He noticed that morning a slight crack on the free border of the prepuce. Fifteen days previously he had had sexual intercourse with a woman of the town. He was under the influence of liquor at the time. On awakening in the morning, he noticed that she had a "skin disease on her body." He did not give the matter any particular attention, other than a careful inspection of the parts. I examined the woman within two hours, and found her suffering from a secondary skin lesion and mucous patches on the vulva. I advised an immediate and free excision of the spot, which he willingly submitted to. The operation was done with antiseptic precautions, and the edges of the wound brought together with fine silk. The wound healed by first intention. No hardness developed in the cicatrix, nor have any symptoms presented themselves up to April, 1894, when I last examined the man.

This case, it appears to me, furnishes as clear evidence of a disease aborted as any that has been published; yet the evidence is in some respects unsatisfactory. At the present time it is absolutely impossible to make a differential diagnosis by the microscope between a chancre and a chancroid. This case may go a long way in determining the course we should pursue in the treatment of the lesion, yet it offers no positive proof that it was syphilitic in character, although the presumptive evidence is very strong.

In six other cases the history is much the same. The wounds healed by first intention in five of them. In the sixth the wound cicatrized after some delay, as the sore had involved the border of the glands, and I did not thoroughly remove the whole of the infected area. The sores had existed for from four to fourteen days. The rash appeared very mildly in all of the cases in from forty to forty-five days from the appearance of the chancre—four entirely escaped any other symptoms. Two had only very slight and easily-controlled mucous patches on the tonsils, but both of these patients had been inveterate smokers and had continued the habit. At least two years have elapsed since the last of this series of chancres was excised, and during the past eighteen months no secondary symptoms have developed in any of the cases.

In considering the subject of excision of the initial lesion, it would be of great advantage if an answer could be made to the question, When is the system infected?

First. Is it immediately on inoculation?

Second. Is it during the incubation period, *i.e.*, prior to the development of the lesion?

Third. Is it subsequent to the development of the lesion?

The first of these—Is it immediately on inoculation?—would, of necessity, open a purely theoretic argument, for which, at the present, I have not the time. I do not believe that it is. All germs require time and a suitable medium for their successful development, the germ of syphilis requiring from seventeen to sixty days—a rather wide range. I know of no means whereby we can detect the slightest evidence of systemic infection immediately after the most suspicious intercourse. Nor, on the closest scrutiny of many observed cases, can the slightest abrasion be discovered.

In reference to the second—Is it during the incubation period, prior to the development of the initial lesion?—again, I believe not. That period of time only has elapsed in which the germ has been able to reproduce itself in sufficient numbers to become manifest, and that at the very seat of inoculation. We have seen that a minimum number of germs are necessary to produce any result. I believe that that number only is attained when the lesion first appears. From this time the increase is fairly rapid. If it were possible to at once excise this spot I believe the system would not be infected, because sufficient of the germs have not been carried into the general system. It cannot surely be argued that the poison had entered the system, been carried throughout the whole economy and back to the very point of entrance, to show itself there and there only. If the system was poisoned before the initial lesion developed, why do not lesions develop on any sore or abraded spots that might have existed on the body during this time? If the system was infected prior to the appearance of the sore, why does it take, on an average, forty-two days longer for the roseola to show itself? Adenitis cannot be discovered before the appearance of the lesion, nor for some shorter or longer time after its appearance.

In reference to the third question—Is it subsequent to the development of the initial lesion?—I answer yes to this. Immediately the germ is developed sufficiently to produce the lesion, the irritation commences, and the lymphatics at once take up the germ or its resulting toxine. The system is now infected, but with the very smallest quantity of poison. This is rapidly augmented, and the poisoning becomes more severe. If, now, the sore is freely excised, possibly not enough poison has entered to produce a systemic effect, but this time must be counted by hours, not days.

The most important and most interesting question, from a clinical standpoint, now presents itself: Does the number of germs that enter the system in any way affect the subsequent course of the disease? If we can demonstrate this point, we have accomplished a great deal for the syphilitic sufferer. It does not sound irrational to say that a little poisonous material

introduced into a suitable medium should take a longer period to contaminate the whole system than would a greater quantity. Nor does it seem to me to be irrational to say that a mild attack of any disease should be more easily controlled than a severe one. The syphilitic germ, like all others, propagates itself in proportion to existing numbers, *i.e.*, after the incubation period has been passed there are thousands where tens existed before. Therefore we should take away any source of an increasing supply and allow the smallest number of germs to propagate themselves in the system. Nature tries to surround this infected area with leucocytes to devour the irritating and poison-producing germs ; but they will not be devoured. She stands by at the glands to arrest them, but without success. Even mucous patches that occur in the mouth and on the tonsils are treated locally as much to prevent systemic reinfection as to remove the unpleasantness caused by their presence. I have endeavored to show that fewer secondary manifestations appear in those from whom the chancre has been excised than in the ordinary case in which excision has not been performed, and, if this is the case, then excision is not only justifiable, but advantageous.

I have tried to base my remarks as much as possible on clinical cases, and have not attempted to quote authorities, with whom, quite possibly, you are more familiar than I am. I advocate the free excision of the sore ; that the wound be not cauterized, except, possibly, with pure carbolic acid, and that the edges be united ; that the operation be done with the strictest antiseptic precautions, including the after-dressing.

I would draw the following conclusions :

- (1) That the early excision of the chancres—that is, within a few hours after their appearance—will abort the disease.
- (2) That the excision of any unhealed chancre will moderate the subsequent secondary manifestations.
- (3) That excision constitutes the cleanest, least painful, and most scientific method of treating the lesion.—*Medical News*.

Clinical Notes.

RETROVERSION WITH SUBINVOLUTION OF THE UTERUS
—ENDOMETRITIS WITH EXUDATION IN BROAD LIGA-
MENT—INTERSTITIAL FIBROID TUMOR OF THE
UTERUS WITH EXTENSIVE LACERATION OF
THE CERVIX — HYPERPLASIA OF THE
UTERUS WITH SEPTIC DEGENERATION
OF THE CERVIX—FIXATION OF THE
PELVIC CONTENTS CURED BY
A NOVEL METHOD.*

BY AUGUSTIN H. GOELET, M.D.,
NEW YORK.

GENTLEMEN,—The first three cases I will show you to-day are new cases, and are what may be called everyday cases, as they are such as one meets in everyday office work. They are, therefore, very instructive, and I hope they will prove interesting to you. It would be of no benefit to you if I showed you unusual cases, which might not otherwise come under your observation in fifteen or twenty years of practice, or if I showed you always cases where abdominal section is required. It is well enough to see such cases, and learn to diagnose the condition, but they are by no means as common as those you will see to-day.

CASE I. The first patient, Mrs. K., is 42 years old, has been married five years, and had one child about a year ago, this being the only time she had been pregnant during her married life. Her delivery was instrumental, which may account for her present condition. She comes because she suffers constant pain in the lower part of her spine, and in the back of her head, and general pelvic pain with bearing down, and leucorrhœa, which is more or less profuse. You have heard her say that she feels this pain in the lower part of the spine, particularly when she is sitting for a long time, and that when she is on her feet she feels as if her womb was coming down. On examination, the first thing you will observe is a laceration of the cervix, which is unilateral, being more extensive on the

*A clinical lecture delivered at the West Side German Clinic, New York.

left side. Next you will notice that the cervix is immediately behind the symphysis pubis, and the fundus has fallen backwards into the hollow of the sacrum, and that the whole uterus is enlarged, occupying a lower position in the pelvis than normal. She has, therefore, a retroversion with some subinvolution. You will be able to detect also by digital touch that the lips of the cervix have already taken on a form of granular inflammation, and as the examining finger is withdrawn you see the examination has produced some abrasion of the surface, as it is stained with blood. Through the speculum this condition is quite apparent.

The treatment which I shall advise in this case is that which I believe will give the most prompt and satisfactory result, viz., repair of the lacerated cervix, with, at the same time, curettage of the uterine cavity, as well as of the canal of the cervix, as it is possible that the condition of granular inflammation involving the cervix extends to the endometrium. After the sutures are removed from the cervix a pessary will be introduced to correct the displacement if it remains. If she consents to the operation, you will have an opportunity of observing its technique. If she declines the operation, the only thing that can be done is to overcome the subinvolution by using the faradic current, as you have seen it employed in other cases of uncomplicated subinvolution, and give electrolysis for the diseased endometrium and cervix. If she neglects treatment, her condition will go from bad to worse.

CASE 2. The next patient comes because she suffers pain in the right side of the pelvis and in the right hip, and has leucorrhœa. She is 42 years old, has been married ten years, and had a miscarriage three years ago. For several months following the miscarriage her menstruation was profuse, continued for a full week, and was accompanied by pain; but for the past two years it has been natural and free from pain. Her general condition, as you see, is good, and she does not give the impression that she is not well.

On examination, the first thing that will be observed is that there is a retroversion, and the uterus is not freely movable, though it is not absolutely fixed. To the right of the uterus there will be found a small mass of exudation involving the broad ligament of that side, and including the tube and ovary, which cannot be distinctly outlined. It will, no doubt, strike you that this mass is not particularly sensitive to pressure, which is not unusual with circumscribed exudations in this location where they are of long standing. This may be accounted for by the fact that all active inflammatory action has long since subsided, and the ovary and tube are buried in this somewhat unyielding mass. The uterus seems enlarged laterally, though it measures only $2\frac{1}{2}$ inches. You will observe that the external os is unusually small, and there is some obstruction to the entrance of the sound at the internal os.

The endometrium is evidently in an unhealthy condition, since a few drops of blood follow the withdrawal of the sound, which was very carefully introduced. There is probably a subacute endometritis. You have observed that the discharge from the cervix, which is slight, is albuminous in character.

I can see no necessity for submitting this patient to dilatation, curettage, and gauze packing, as is customary now with some gynæcologists in dealing with such cases. In cases where the endometritis is in a more advanced stage, as, for example, in the other case which you have just seen, it may be employed with advantage.

In this case I shall use electricity. Mild negative galvanic appliances to the uterine canal to establish free drainage from the cavity and overcome the endometritis, and bi-polar vaginal faradization to stimulate absorption of the deposit. When the deposit has been removed, if the uterus does not resume its natural position, a pessary will be used to sustain it, and faradization will be continued to strengthen the uterine supports. I shall expect, however, that the malposition will be corrected by the time the deposit has been removed.

CASE 3. The next patient, Mrs. G., is 40 years old, and had one child eleven years ago, since which time she has never been pregnant. She complains of backache, pelvic pain, profuse leucorrhœa, and excessive menstruation. These symptoms date back several years, but she cannot say definitely when they first made their appearance.

On examination you will find an extensive laceration of the cervix, and the lips covered with granulations. The uterus is enlarged to the size of the double fist, and is firm, even hard, to the touch. The uterine canal measures $4\frac{1}{2}$ inches, the sound passing up towards the left along a somewhat tortuous canal.

The diagnosis in this case is an interstitial fibroid, involving the right lateral wall of the uterus, associated with which is a chronic granular endometritis.

I shall advise, in this case, ligation of the uterine arteries with a view of cutting off the blood supply, thereby controlling the loss of blood and reducing the size of the tumor. I have had very favorable results with this operation, though I must admit that complete disappearance of the tumor has not resulted in any of my cases, though in several the growth has been reduced one-half within a year after the operation. The bleeding is immediately controlled.

You have heard the patient say since I have mentioned an operation that she has been under treatment at the Woman's Hospital, and left because they wanted to operate upon her. This she did not tell us before. She declines operation, though I have assured her that it involves little or no

risk. We must, then, endeavor to afford her relief by some other means. Electricity will relieve her symptoms, and effect some diminution in the size of the growth. This may be done with the positive pole, used intra-uterine with the platinum electrode, but the process is slow and the result not so satisfactory as with metallic interstitial electrolysis. I shall, therefore, use in this case the zinc electrode with the positive pole, thereby producing very decided cauterization of the endometrium. I have had some excellent results with this form of electrolysis, in cases where the ordinary method of application had been employed before with but little benefit. In one case, which some of you have seen here, after using the ordinary electrolysis for a period extending over six months, there was so little reduction in the size of the tumor that I advised ligation of the uterine arteries, which was refused. Because her symptoms were relieved she could not be persuaded it was necessary. We then began zinc electrolysis to the endometrium, and in the last three months, though not more than six or seven applications have been made, the tumor is reduced fully one-half.

The next case is one of hyperplasia of the uterus, with cystic degeneration of the Nabothian glands. The uterus, as you will observe on digital examination, is enlarged and indurated, and you can feel these small cysts under the mucous membrane of the cervix. This is a very obstinate condition, which yields very slowly to any form of treatment.

I shall empty these cysts by puncture with a spear, or a sharp-pointed tenotomy knife will answer the purpose very well. This must be frequently repeated as the cysts come to the surface. In conjunction with this treatment, I have had very good results from negative electrolysis applied to the whole length of the uterine canal. This acts by softening the indurated tissues, and stimulating a natural circulation and nutrition.

I will show you now another case which is not new, but which is interesting because it illustrates the result which may be accomplished by appropriate treatment faithfully carried out.

CASE 5. This patient, Mrs. L., aged 28 years, first came to the clinic something over a year ago. At that time, as the result of a previous pelvic inflammation, there was an extensive exudation surrounding the uterus, and fixing it in the pelvis. This had undoubtedly existed for several years, judging from the history of the case. The pelvic structures were extremely sensitive, rendering it impossible to make a satisfactory examination. The condition was no doubt the result of an old salpingitis and perisalpingitis, following in the track of an endometritis. Some inflammation of the endometrium still existed at that time, and drainage from the uterus was obstructed at the cervical canal. On account of the exquisite sensibility of the parts, no attempt was at first made to introduce

anything into the uterus, but she was directed to have bi-polar faradization with the fine wire current every second day. Improvement was marked from the first, and we were soon able to establish drainage from the uterus in the manner you have seen adopted in other cases I have shown you to-day.

The patient has had no treatment now for five or six months. I will ask you to examine her and tell me what you think of the result which has been accomplished. You will find the uterus now freely movable, and there is no appreciable evidence of the previous exudation or disease of the appendages.

REPORT OF A DISSECTION OF A LEG CRUSHED BY A LOADED SLEIGH PASSING OVER IT.*

BY GEO. A. PETERS, M.B., F.R.C.S. ENG.,

TORONTO.

A LOADED sleigh had passed over the leg in its lower fourth. The skin is found to be divided throughout two-thirds of the circumference of the limb, about two inches above the internal malleolus. The division extends around the anterior, inner, and posterior aspects of the limb, which had apparently been lying on its outer side when the accident was sustained. There are several lines of superficial abrasions below the line of division. The subcutaneous tissue is completely crushed and torn, even under that portion of the skin which is not divided.

Bones. The tibia is broken one and a half inches above the internal malleolus. The fracture is a comminuted one, and several fragments have been separated and lost. The periosteum is stripped one inch from the lower and three inches from the upper fragment, having evidently been torn off by the traction of the muscles to which it remains attached. The fibula is broken (*a*) two inches above the external malleolus; (*b*) again two and a half inches above this point. The intervening fragment is split longitudinally in three lines, and completely flattened, the marrow having been crushed out of the medulla. This fragment was found in the soft parts completely separated from the periosteum. The periosteum is stripped from the upper fragment to the extent of four inches, and remains attached to the peronei muscles.

Muscles. Tendo-Achilles not divided. Soleus crushed from its muscular insertion into this tendon. Skin and fascia torn from the back of tendo-Achilles for about one and a half inches.

Tibialis posticus and flexor longus digitorum. Tendinous portion not divided, but portions which are muscular at the seat of injury are crushed and torn from the tendons.

Flexor longus pollicis, which is almost completely muscular at this level, is entirely torn across, and a shred of the lower portion is herniated through a portion of the posterior annular ligament.

*Presented to the Toronto Pathological Society.

Peroneus tertius. Muscular at this level, completely divided.

Peronei longus and brevis. Tendons not severed, but their muscular portions crushed.

Tibialis anticus and extensor longus digitorum. Same as peronei.

Extensor proprius pollicis. Muscular at this level, entirely torn across.

Nerves. Posterior tibial and musculo-cutaneous stripped from their sheaths and the surrounding tissues, but not divided.

Anterior tibial torn across, and stripped from the sheath.

Arteries and Veins. Posterior tibial artery and venæ comites remain enclosed in their sheath, and are not torn across, though the sheath is separated from all other structures for an extent of about four inches.

Anterior tibial artery is ruptured at the level of the injury, and filled with clot as far as exposed.

Internal and external saphena veins are torn across.

The specimen illustrates the marvellous resisting powers of the nerves and arteries under such terrible crushing force.

It also testifies to the fact that muscles have an attachment to the periosteum so intimate that they are capable of stripping it from the subjacent bone over wide areas, particularly in young subjects.

NOTE ON NEPHRITIS IN THE SHEEP.*

BY DR. J. T. FOTHERINGHAM,
TORONTO.

THE kidney from which the specimens submitted were cut was one which I noticed lying in the window of a Yonge-street butcher shop some weeks ago. Its evidently diseased condition caught my eye, and microscopic examination proves the presence of severe acute interstitial inflammation, apparently pyæmic in origin. The absence of any clinical history of the case is unfortunate, but I venture to submit it as an example of the essential unity of disease processes in homologous animal structures, and a small contribution towards the disproof, if any were yet necessary, of the erroneous views of evolution and of disease still prevailing among the laity, and among such "professionals" as the Christian Scientists, faith healers, homœopaths, *et hoc genus omne*.

The gross appearances of the organ were as follows: Apparently enlarged, pale, and slightly waxy externally; cortex pale and thickened; here and there, on the surface, patches of more marked grayness beneath the capsule. Capsule not too adherent.

Microscopically, the changes noted may be grouped thus:

(1) *Vascular*. Not marked; no signs of congestion; few or no blood masses to be seen in the larger vessels. No pigmentation, as from passive congestion. The glomeruli are all the seat of invasion of inflammatory corpuscles, some of them to a very high degree. In most cases Bowman's capsules are free, but in some the invasion of the irritant has caused marked inflammation of both glomerulus and surrounding tissue, the whole forming a focus densely infiltrated with inflammatory corpuscles. There is no sign of sclerosis.

(2) *Epithelial changes*. The most marked change is an almost universally cloudy swelling, causing the cells to stain feebly in alum-cochineal, and to lose their outline, the lumen of most of the tubules being filled with granular detritus, and the single cells lining them being indistinguishable.

* Read before the Toronto Pathological Society.

(3) *Interstitial tissue.* The brunt of the disease process has been borne by this element of the organ. The low power shows the usual wedge of infiltrated tissue next the capsule, with the inflamed area descending in the medullary rays rather than in the "labyrinth" areas, even almost to the papillæ. There is no increase in the amount of interstitial tissue, and no evidence of cirrhotic process, probably on account of the acuteness of the condition. Neither are there many foci that have gone on so far as to form abscess cavities. Many minute foci of intense beginning inflammation are seen, evidently of an embolic origin, as the tubules in the immediate vicinity are invaded, while from the central infiltrated area fingers of inflammation extend in the intervals between the tubules.

The picture presented is that of death accompanied by high fever, causing the cloudy swelling and epithelial degeneration, and probably pyæmic in character, and the animal cannot, I should say, have been possibly fit for human consumption.

GLIOMA OF THE BRAIN.

BY A. PRIMROSE, M.B.,
TORONTO.

THE following is the history of a case reported at a meeting of the Pathological Society of Toronto. The specimen was shown:

G.B., æt. 42, came to me on March 2nd, 1892, complaining of headache of a persistent character. He had had constant frontal headache for the previous three weeks, the pain of varying intensity, and for a few days immediately before his visit to me he had complained of feeling drowsy. His wife had noticed that for two months there had been marked irritability of temper. Dr. Graham saw him with me on March 6th, when the following condition was noted: The right side of each retina was inactive; he could not see an object when the image was thrown on the right half of the retina; pupils equal and reacted to light. The patellar reflexes were exaggerated on the left side, present on both sides. With dynamometer the pressure exerted was five pounds more in left hand than in right. The power of flexing the foot on the leg was greater on left than right. Cutaneous sensory function normal. There was no delay in transmission and appreciation of sensory impulses.

On the following day (March 7th), several attacks of muscular twitching in both legs were noticed by the attendants. Dr. Reeve examined the eyes, and reported double optic neuritis, more marked on the left side; right homonymous hemianopsia was determined. The pupil did not contract on throwing the light on the right half of the retina, whilst it contracted markedly on throwing the light on the left half of the retina. Pupils equal; no strabismus. It was now ordered that the patient should have 45 grains of iodide of potassium every four hours, and phenacetine in ten-grain doses to relieve headache.

On March 9th some ptosis of right eyelid was noted, and the patient was very drowsy. During the night $\frac{1}{4}$ grain of morphia was administered to relieve pain; two hours afterwards the nurse noticed that the pupils were contracted and the respirations very slow, six to eight per minute, whilst patient slept heavily. The respiratory action, however, improved, but patient remained very drowsy all the day following.

March 12th, his pulse was 48 per minute; he had spent a restless night. It was possible to rouse him, and with difficulty it was possible to make him understand what was said to him. During the day he had one or two shivering fits. One of these occurred whilst I was there. It consisted of a general muscular twitching of both arms and both legs.

March 13th. Pulse, 48; respiration, 16. Difficult to rouse him. There was some delay in cerebation; he answered questions about ten seconds after they were asked.

On March 14th decided improvement was noted. He talked quite rationally, and asked questions. Pulse, 56; respiration, 18.

The improvement continued throughout the four following days. During this time, however, he complained of pain in the back of the head and neck, and subsequently of a sense of fullness in the head. His mind seemed clear, and he inquired minutely about his condition and his chances of recovery.

On March 19th, after a night of considerable suffering, his condition was very much worse. He was very drowsy, and his respirations became very irregular. Four or five respirations, then a pause, the deepest inspiration being taken immediately after the pause. He remained in a somnolent condition most of the time. At 9 p.m. he was sleeping quietly, when suddenly a distressing attack of muscular twitching came on. These attacks were repeated at short intervals. The whole bed would shake at each seizure. The attacks left him very weak. The breathing became stertorous; this was relieved somewhat by turning the head well over to one side, in order to let the tongue fall forward. The patient died at seven o'clock next morning (March 20th), without having regained consciousness.

This patient had been performing his duties as inspector in connection with the engineer's department of a civic corporation up to the date on which I saw him first, eighteen days before his death.

Autopsy. March 20th, 1892. On removing the skull cap, the dura mater presented a normal appearance. The dura was opened and the brain removed. The surface of the hemispheres was unusually pale. The right optic tract was traced back towards the corpora quadrigemina; it was abnormally soft, and appeared to be flattened out and widened. The crura cerebri were divided at their anterior extremities, and the cerebellum and mesencephalon, with the pons and medulla, were removed; nothing abnormal was detected in them. On examining the cerebral cortex, a spot the size of a twenty-five-cent piece existed on the under surface of the occipital lobe, just within the great longitudinal fissure. The spot referred to was just over the posterior extremity of the inferior occipito-temporal convolution. In that situation it would be in contact with the

upper surface of the cerebellum, and direct pressure might readily be exercised anteriorly upon the right half of the corpora quadrigemina and geniculate bodies with the origin of the right optic tract. The spot on the cortex was of a dirty gray color, mottled, with patches of dark and light color. On feeling over this area a firm material was detected occupying the occipital lobe, within the interior of the brain substance. On cutting into this, a tumor as large as a small-sized hen's egg was found occupying the occipital lobe. It was very near the cortex on the inner and under surface, but was some distance from the surface on the upper and outer surface, normal brain tissue intervening.

The tumor appeared to be encapsuled, and presented an appearance of a spongy texture; an interlacement of fibres, in the interstices of which existed soft material resembling very much the *débris* found in a caseating gland. There was no fluid in the tumor. The ventricles seemed to contain an unusually small amount of fluid.

Microscopic section of the growth proved it to be composed of cells, most of them round or oval in outline, and many of them exhibiting branches which seemed to communicate with similar branches of neighboring cells. The protoplasm of the cell is finely granular in appearance. The section shows an abundant supply of blood vessels, and exhibits one or two minute extravasations of blood.

Some points of interest in connection with this case are :

(1) The locality of the headache (frontal until shortly before death) in this case illustrates the fact, as stated by authorities on brain tumors, that the locality of the pain does not always correspond to the locality of the disease.

(2) The pain complained of shortly before death in the occipital region was probably due to irritation of the meninges in the region of the growth, and the muscular twitching (which was not unilateral or confined to any one group of muscles) was due either to a meningitis of a more general character, or to pressure exercised at the base of the brain.

(3) The failure to produce contraction of the pupil by throwing a beam of light on the blind half of the retina, whilst reaction to light was marked on the other half of the retina, is extremely interesting. It enabled those who saw the patient to assume that the hemianopsia was due to a tract lesion and not to a cortical lesion solely—a point of great importance, as it at once decided the question as to whether or not operation were indicated for the patient's relief. In reference to this point in diagnosis, Ferrier states in his Croonian lectures on cerebral localization as follows: "A distinguishing test between tract and central hemiopia consists in determining whether a pencil of light thrown on the blind side of the retina induces contraction of the pupil or not. As the optic tract is the path of

the fibres which excite pupillary contraction through the oculo-motor centres, as well as those which excite visual sensation in the cortex, lesion of the optic tract will cause not only hemiopia, but also paralysis of the reflex reaction of the pupils to light ; whereas lesion of the cortical centres will cause hemiopia and leave intact the pupillary reaction."

Progress of Medicine.

OBSTETRICS

IN CHARGE OF

ADAM H. WRIGHT, B.A., M.D. Tor.,

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ASSISTED BY

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PUERPERAL NEURITIS.

With an expansion of our knowledge of the complications of the parturient and puerperal states, and with a growing familiarity with the lesions of the peripheral nerves, we have come to learn that the intoxications dependent upon infection through wounds and lacerations resulting in the course of childbirth may give rise to a multiple neuritis comparable to that of rheumatic, plumbic, alcoholic, or other like origin. A typical case of this kind was recently reported by Lountz (*Nouvelles Archives d'Obstétrique et de Gynécologie*, 1894, No. 9, p. 419) at a meeting of the Société de Neurologie, of Moscow. The patient was a primipara, twenty-four years old, who passed through pregnancy and labor without complication, the child dying, however, on the fifteenth day. Three weeks after the labor the woman presented swelling of the face, œdema of the extremities, difficulty of deglutition, diplopia, pains in the extremities, and then numbness and weakness of the upper and lower members. Common sensibility was little affected, but the muscular sense was impaired. The knee-jerks and the elbow-jerks were abolished, and electric irritability was diminished. These symptoms were progressive for two weeks. To them were added arrhythmia of the heart, acceleration of the pulse, and attacks of suffocation. The lower extremities became entirely paralyzed. By and by, however, the symptoms gradually ameliorated, except the paraplegia, which persisted for a long time. It is assumed that this depended upon a polyneuritis due to infection through a laceration of the perinæum incurred during labor.—*Medical News*.

VOMITING OF PREGNANCY.

A writer in the *Lancet* says: "I have not failed once for many years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritis pudendi of the puerperal condition yielded as readily, and to one application.—*Medical and Surgical Journal*.

PLACENTAL MOLES.

Kehler (*Archiv fur Gynakologie*, Bd. xlv., H. 3), after giving an exhaustive series of statistics regarding mole pregnancies, arrives at the following conclusions:

Twelve per cent. of his cases had had precedent abortions. Previous general health or genital disease seemed to exercise but little influence in the production of moles. Vomiting in such cases the author does not find more common than in normal pregnancies. A feeling of debility seems to be more common and more severe in mole than in normal pregnancies. Pain in the abdomen was noted in 42.5 per cent., but there was nothing characteristic in the pain, and no tenderness was noted. Œdema of the lower extremities was seen in 30 per cent. of cases. This condition seems more frequent here than in normal pregnancies, but in some of the cases nephritis was coincident.

A significant largeness of size of the uterus, not corresponding to the time of the pregnancy, was noted, and this increase in size was without evidences of foetal extremities or heart beat. This symptom the author regards as suggestive.

Uterine hæmorrhage occurred in forty-one out of fifty cases; it was irregular and intermittent, and in fourteen cases it was severe.

The author has demonstrated that the majority of mole pregnancies end in abortion between the fourth and fifth months.

It has been found in forty-five out of fifty cases that the duration of birth was twenty-four hours. In two-thirds of his cases the duration of labor was under six hours. Labor pains were weak in 22 per cent.; regular and moderately strong in the same percentage; strong in 52 per cent., and intermittent in 4 per cent. Hæmorrhage was entirely absent in 12 per cent., but in somewhat over half of the cases severe hæmorrhage occurred during birth. In some this bleeding was severe enough to produce syncope. The size of the moles varied from one-half to three kilos, and their diameter from eight to thirty centimetres.

In two-thirds of the cases the expulsion of the mole can be left to uterine contractions alone. If hæmorrhage be present, the antiseptic

vaginal tampon should be used. The author advises induced abortion in all cases when the diagnosis is established. Regarding the puerperal period in such cases, two-thirds of all patients experience no special disturbance; the average duration of the puerperal period was fifteen days. Complete restoration to health followed in two-thirds of the cases.

Subsequent menstruation occurred normally in 51 per cent., freely in 37.7 per cent., irregularly in 6 per cent., returned but once in 2.2 per cent. In 5 per cent. there was no return of menstruation. Secondary sterility has been observed scarcely more frequently than after abortion.

The pathology of the placental mole the author regards as the following: (1) The membranous tufts have the same form as the normal embryonic tufts or chorion tufts of the first two months.

Moles have certain important life peculiarities, as: (1) The membranous tufts consist of living, growing tissue elements. (2) They draw their nutrition immediately from the uterine walls. (3) Notwithstanding this apparently unfavorable condition, the tufts do not fall into necrosis as the chorion tufts do after withdrawal of the blood supply, but continue to live and grow.—*American Journal of the Medical Sciences.*

THE TREATMENT OF THE ACCUMULATION OF MILK IN THE BREASTS OF THE NEWBORN.

Opitz (*Berliner klinische Wochenschrift*, June 25th, 1894), after considering the frequency of milk accumulation in the breasts of male as well as female infants, speaks of the tendency of nurses to empty them by rubbing and pressure. Such maltreatment of the infantile mammary glands may easily be followed by abscess, which, in female infants, may greatly interfere with the subsequent function of the glands. The swollen glands are best covered with a non-irritating plaster, as lead plaster, which should be daily renewed. The accumulated milk will disappear in a few weeks.—*Univ. Med. Mag.*

PUERPERAL ECLAMPSIA AND ITS TREATMENT.

Ferré, Pau (*Nouv. Archiv. d'Obstet. et de Gynécol.*, September, 1894). The author relates two cases of eclampsia, both of which were treated successfully by hypodermic injections of an eight per cent. solution of common salt in distilled water. From 200 to 700 grammes were injected at a time by means of Dieulafoy's apparatus. Ferré observes that "Porak believes that the introduction of a great quantity of saline water increases blood tension, and, in this way, leads to re-establishment of renal secretion," but he himself is inclined to think that the diminution of renal secretion is the result of the eclamptic seizures, and that the introduction

of large quantities of water acts as a nervine sedative by diluting the toxic matters in the blood and thus diminishing their power. The suspension of the attacks allows the circulation to recover its balance, and the secretions become re-established; thus, as in Ferré's two cases, the periods of complete or partial suppression are succeeded by those of polyuria.—*Med. Chronicle*.

INDUCTION OF PREMATURE LABOR BY THE USE OF GLYCERIN BOUGIES.

Theilhaber (*Centralblatt für Gynakologie*) contributes a description of a method of using glycerin bougies for the induction of premature labor. For two years past Pelzer's method of inducing labor by injection of sterilized glycerin between the membranes and the uterine wall has been well known. While it is usually effective in inducing uterine contractions, dangerous results, such as chill, fever, violent vomiting, and evidences of interstitial nephritis or hepatitis are also reported. These seem due to the chemical irritation of the glycerin on the uterine wall, and to its absorption rather than to any osmotic action it may set up between the fluids of the ovum and itself. The hypodermatic injection of glycerin causes hæmoglobinuria and interstitial nephritis. The simplest and least hurtful method of applying glycerin to the intra-uterine surface is that of glycerin bougies. These consist of a rounded thin bougie of fish bone, covered with a thin layer of 1 per cent. of sublimate collodin. Over this is a mixture of 5.9 per cent. glycerin and gelatin, which, to prevent moulding, is mixed with 2 per cent. tricresol. The bougies are packed in waxed paper that is smeared inside with 3 per cent. tricresol vaseline. Besides these, a second sort are prepared which contain as a nucleus a fifteen centimetre fish bone, and are coated with a 7.5 gramme of glycerin and gelatin. One case is narrated of the use of these bougies by the author with excellent results, two bougies being used. How much influence the mere presence of the bougies had upon the case is uncertain, but it is believed that the glycerin greatly hastened the desired result. The small amount of glycerin used could scarcely be productive of danger.—*American Journal of the Medical Sciences*.

GENITO-URINARY AND RECTAL SURGERY

IN CHARGE OF

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A CASE OF CYSTINURIA.

Hall (*Quarterly Medical Journal*, vol. iii., part 1, p. 26) has reported the case of a miner, thirty-two years old, who complained of lumbar pains and of having passed stones; but examination with a sound failed to disclose the presence of a calculus in the bladder. The man was of good habits, and had lived in the same locality for eighteen years. He had suffered a good deal from sick headache. Ten years before coming under observation he had an attack of what was called pleurisy on the right side, in the course of which he passed a stone the size of a pea. Subsequently he began to suffer from pain in the back on both sides, and twelve months later passed another small stone, which caused much pain. After this he passed various-sized stones every year, more in the spring than at other times; the largest number was four in one day and fourteen in one month. The largest stone was passed a few years before the man came under observation, when he lost also about a pint of blood. The last stone had been passed seven months previously. The pain radiated from the back to the testicles, causing in these a sense of heaviness. From time to time attacks of colic occurred. The urine was clear and high-colored, and deposited a sediment. There was tenderness on pressure over the loins, and well-marked cutaneous hyperæsthesia in the middle line from the twelfth dorsal to the third lumbar spine, and passing from this outward in a somewhat triangular shape and ending at the mid-axillary line. On the right side in front there were one or two spots of hyperæsthesia over the anterior superior spine of the ilium; and on the left one or two spots somewhat higher, also over Poupart's ligament as far as the external abdominal ring.

The patient brought with him seven calculi which he had passed by the urethra at different times. The largest measured half an inch by a quarter of an inch. It was ovoid in shape, of a honey-yellow color, with sparkling crystalline surface; on fracture it presented a yellow, powdery appearance. The other stones were quite small, three being faceted.

The calculi were insoluble in water and soluble in ammonia, and also in nitric acid. On evaporation large hexagonal crystals of cystin remained, together with rhombic prisms arranged in star-shaped clusters. The urine was alkaline in reaction, and contained neither albumin nor sugar. It deposited a copious sediment consisting of phosphates, together with small round masses with radiating lines not soluble in acid, but disappearing with heat. These latter were believed to be ammonium urate. For a few days the patient was not placed upon treatment, in order that a study of the urine might be made. The quantity passed varied between 40 and 58¼ ounces in twenty-four hours. On several occasions cystin-crystals were found.

Alkaline treatment was then instituted and continued for seven weeks. This consisted in the administration of a combination consisting of potassium bicarbonate 12 drams, citric acid 8 drams 24 grains, and water 12 ounces, of which an ounce was taken in water every three hours. During this time the daily quantity of urine averaged 69.7 ounces. The patient felt much better and suffered much less pain. Throughout this whole period no crystals of cystin could be found, though frequent examination of the urine was made, but as soon as the treatment was suspended the crystals appeared. The patient was dismissed and advised to continue the alkaline medication, but he disappeared from observation.—*Medical News*.

INTERNAL HÆMORRHOIDS.

Dundore, after an exhaustive paper on the subject of internal hæmorrhoids, concludes as follows :

(1) The ligature is the safest method of operating for internal hæmorrhoids, as there is less likelihood of its being followed by hæmorrhage, stricture, or ulcers.

(2) The clamp and cautery cause less pain, shorter convalescence, and are less likely to be followed by retention of urine than when the ligature is used ; but hæmorrhage and stricture of the rectum may very often follow their improper application.

(3) The practice of Whitehead's method should be limited to those cases in which the entire circumference of the anus is involved. In ordinary cases of one or more hæmorrhoids it should never be used, as it is liable to be followed by severe after-effects, and at best could produce no more radical result than the clamp and cautery or ligature.

(4) Simple dilatation of the sphincter, injection of carbolic acid, and Manley's method are simple palliatives, and their use is very limited.

(5) There is no single operation which is available in all cases. Experience alone should suggest the most efficient method of treating each individual case.—*Mathews' Medical Quarterly*.

PIPERAZIN.

Of great benefit in four cases of renal colic treated by the author. Dose, 5 to 10 grains (0.32 to 0.65 gramme) with 5 grains (0.32 gramme) of phenocoll in lithia water every two hours. The amount of urine is rapidly increased and the pain relieved. The angles of the calculi are dissolved, and they are thus passed without pain. Phosphatic calculi are broken up by the destruction of the cementing matter. Large quantities of the drug may be used without untoward symptoms. As it is not irritating, it has been of great advantage in washing out the bladder in cases of vesical calculus.—*New York Medical Journal*.

 TO RELIEVE DYSURIA OF GONORRHOEA.

The following has given brilliant results to the author :

R.—Sodii salicylate..... \bar{z} ii.
 Tr. Belladonna.....Fl. \bar{z} ii.
 Tr. Aurantii.....Fl. \bar{z} i.
 Aq. dest.....ad \bar{z} vi.

Sig.—One tablespoonful every third hour.

—*R. J. Blackham, in Clinical Journal*.

 AUTO-INOCULATION OF HARD CHANCRE.

S. Nolin, in *Norsk Magazin fur Lagevidenskaben*, reports three cases of this kind. In the first the seat of the chancre was on the inner side of the eyelid, which the patient had rubbed continually, a particle of iron having lodged in the conjunctival cul-de-sac. In the second case the chancre was inoculated in the right armpit ; while in the third it occurred in the folds of the prepuce.—*Universal Medical Journal*.

[I have seen one undoubted case of this kind. The original chancre was on the free border of the prepuce and the inoculated sore was on the glans peni, at the exact spot where the chancre came in contact with it.—E.E.K.]

Editorials.

THE MEDICAL PROFESSION OF ONTARIO AND THE LEGISLATURE.

WE publish with pleasure in this issue that portion of the very able address of the Minister of Education, delivered at the recent banquet of the Medical Faculty of the University of Toronto, which refers to matters of interest to the medical profession of this province. He first asks the question: "Would it not be in the public interest to abolish the Medical Council?" This brings to our attention the fact that certain parties are advocating the abolition of that body. Dr. Ross then goes on to refer to the monopoly cry, and the desire for a readjustment of the standards for admission to the study of medicine, and a shorter and easier course in every respect.

It is difficult to conceive why any intelligent body of men should desire a lowering of the standards in medical education. We hope the members of our profession will take some active interest in this agitation, no matter how absurd or unreasonable it may appear to them. Experience in the past has taught us that the public does not like anything bearing even the appearance of a monopoly in the medical profession. Some unscrupulous men are now endeavoring to show that doctors, through the means of their medical parliament, are trying to erect "insuperable barriers in the way of entrance to the profession" from purely selfish motives.

Extremists among our physicians have, by certain unwise utterances, assisted in creating a suspicion in the minds of many that they would gladly see something like a monopoly. It is well for us to remember one simple fact—if we seek for legislation which is clearly in the interests of the public, we are not likely to meet with any strenuous opposition; but if we attempt to procure the enactment of laws that are purely in the interests of our own beloved selves, the profession of Ontario, we will certainly encounter very serious opposition. We believe, however, that we can very confidently state that the existence of the Medical Council, as at present constituted, and the high standards which are required in

accordance with the council's curriculum, are decidedly in the interest of the public. Our citizens will undoubtedly be much safer in the hands of educated, scientific physicians than they would be under the charge of half-educated, unscientific practitioners, who are very apt to degenerate into unprincipled charlatans.

THE PROPOSED PARK HOSPITAL.

WE have heard much about a "Park hospital." The generous gift of the late Senator Macdonald was apparently very highly appreciated by all classes of citizens in Toronto. The friends of the new hospital scheme were many, the enemies—visibly—none. The government, the university, the affiliated institutions, the public, all favored the erection of a hospital which, for many reasons, was likely to do exceptionally good work in the way of assisting suffering humanity, and, at the same time, advancing the interests of scientific medicine.

Such was the position of matters connected with this proposed hospital a few years ago. What is the position now? Dr. McArthur, the chairman of the Toronto dinner, made some allusion of a felicitous character to the subject in his opening address. Mr. Mulock, the Vice-Chancellor, in responding to the toast, "Toronto University," made the unwelcome announcement that he was "sorry to say the indications were that there would be no Park hospital, which, he thought, would be a calamity." What is the cause of such a threatened calamity? Unexpected opposition has arisen in some mysterious way, that no one, so far as we know, can satisfactorily explain.

We will not now attempt to discuss the causes of the obstruction, which, in certain quarters, we have to confess we are utterly unable to fathom. We are not without hope that better counsels will soon prevail. The prospects appear to be very dark now. The words of the Vice-Chancellor, evidently spoken in deep sorrow, are very discouraging. Still, we can see no reason why united efforts on the part of those who were once friendly to the scheme should not, even now, be successful in removing the obstacles that block the way.

THE MEDICAL COLLEGE DINNERS.

THE medical students' dinner has been for some time a "recognized institution." For eighteen years the students, with the members of their faculties, friends, and representative guests, have annually met at the festive board on the occasion of the "annual banquet." It appears to grow

bigger, broader, and longer from year to year ; and one begins to wonder when the limit will be reached. Fancy the amount of enthusiasm that will keep "the boys" together at a cold-water dinner for eight solid hours, with their blood gradually, but steadily, rising from normal to an almost dangerous fever heat ! Think, at the same time, that the enthusiasm is still bubbling over at the end of all these hours ! Then tell us if you have ever seen anything like it in the whole "wide, wide world."

We think we are undoubtedly correct in saying that these medical dinners are the most successful of all the college banquets that are held in Toronto. There appears to be a perfect system of organization among medical students which enables the managing committees to retain all the excellent features of former dinners, and, at the same time, to add during each succeeding year something in the way of improvement.

The students of Trinity Medical College held their banquet in the Rossin House on Thursday, November 29th. Report says that Mr. George Elliott proved a most able and efficient chairman. The numbers in attendance were large, and the dinner is said to have been a great success in every respect.

The banquet of the students of the Medical Faculty of the University of Toronto was held in the same place, one week later, Thursday, December 6th. Dr. W. T. McArthur, the chairman, made an admirable speech in opening the intellectual part of the feast, and was well supported by his brother students during the short hours of the night. The various students who were placed on the programme, both in the capacity of speakers and singers, acquitted themselves in a very creditable manner. Many excellent addresses were delivered by members of the faculty and certain of the guests. These were evidently highly appreciated by the students, who fully testified as to their appreciation with *no uncertain sounds*. We have much pleasure in congratulating Mr. McArthur and his co-workers on the committee of management for the brilliant success which attended their efforts to make this one of the best banquets in the history of this Medical Faculty.

LODGE PRACTICE.

WE have been asked to answer the following question : "A physician is employed by the Foresters, or any other society, as a physician to attend members of the lodge for, say, one year at a dollar a year for each member. Is such a physician supposed or compelled to perform surgical or gynecological operations on such members without any remuneration save the annual fee of one dollar ?"

In a general way, the correct answer is yes ; but, of course, it depends largely or wholly on the terms of the contract. If a physician enters into a contract to attend the members of a society for a certain sum without any definite conditions, we understand the courts will recognize no difference between the treatment of an influenza and the opening of an abscess. A physician in this country is recognized as a person licensed to practise medicine, surgery, and midwifery.

Is the lodge doctor expected to perform major operations and treat obscure diseases of the eye, ear, etc. ? Or if he considers that he is not capable of performing any operation, or treating any special disease, can he, by refusing to do anything beyond his abilities, be relieved from responsibility for such work ? There seems to be considerable doubt with reference to certain points involved in these questions ; but we have been informed that the doctor who simply undertakes to attend the members of a lodge during illness, with no qualifications or reservations, is compelled to treat all diseases, whether surgical, medical, or special, or, if he is unable to do so himself, must get the work done by others.

A recent decision by one of our judges in Toronto created some surprise. According to the general by-laws of a lodge, no member was entitled to any "benefits" if incapacitated for work by venereal disease, or any other contracted in consequence of his own wrongdoing. The regular surgeon of the lodge attended a member for certain sequelæ of syphilis, and sent in his bill in the ordinary way. Payment being refused, he sued his patient, but was nonsuited by the judge on the ground that the contract between the doctor and the lodge did not show that any exception was to be made in such cases. He practically ruled that, under the circumstances, the "benefits" included only the ordinary payments per week to which members were entitled during illness not induced by their own imprudences.

It practically amounts to this, that the physician who undertakes unreservedly to attend the members of a lodge for a certain sum of money gives up his independence entirely, and, as the lodge's hired man, had better meekly obey orders, and ask no questions. We understand that the physicians of Toronto, recognizing this fact, have taken care in recent years to introduce certain clauses in their contracts which limit, to some extent, the responsibilities which they have to assume. In some cases exceptions are made as to the performance of serious surgical operations, or the treatment of certain diseases which are recognized as coming within the province of specialists. In the case of women (we understand that women's lodges are growing and multiplying rapidly), exceptions are generally made as to obstetrical and gynecological work. To the physician who determines to do "lodge" practice we have only to say—

your responsibilities will depend upon the provisions of your contract. In deciding to give up certain prerogatives of manhood, look into the matter in a business way, and make the best terms you can. The best will always be poor enough.

THE MEDICAL PROFESSION OF ONTARIO AND THE LEGISLATURE.

Abstract of Address delivered at the Banquet of the Medical Faculty of the University of Toronto, December 6, by Hon. Geo. W. Ross, LL.D., Minister of Education.

IT is likely the medical profession and its privileges will be up for discussion before the next session of the Legislative Assembly, and it is possible the question may be asked, Is there any good ground for throwing around the practice of medicine any statutory safeguards whatever? Would it not be in the public interest to abolish the Medical Council and allow the various colleges and schools of medicine in the country the fullest liberty in the matter of issuing licenses to practise medicine? You are doubtless aware that the Medical Council was first established in 1866 by the old parliament of Canada, that since that time medical councils having jurisdiction somewhat similar to the Medical Council of Ontario have been established in England and a great many States of the American Union. The object of the legislature in establishing the council was not so much to protect the profession as it was to protect the public. Different schools of medicine and colleges were found to be competing with each other for students, and, from the desire which students usually have to find, if possible, some royal road to learning, the college offering the greatest facilities for an easy degree might possibly have the largest number of graduates. It will be for the medical profession to show that the protection given to the public by the establishment of the Medical Council has not unintentionally resulted in creating a monopoly for the medical profession, or erected insuperable barriers in the way of entrance to the profession, that the Medical Council has itself been progressive in the highest sense of the term, and that through its examinations professional education has not been retarded, but rather advanced.

Then, when you have justified the existence of the Medical Council, as I hope you will be able to do, you may be asked to readjust the standards of the profession. For instance, it is said that the standard of admission to the profession should be lowered, the course of study shortened, and the additional year for clinical study under a regular practitioner abolished. Each of these objections must be examined on

its merits. Does the standard for admission now prescribed deter any person of reasonable ability from entering the profession? Are the obligations imposed by the medical profession upon the students, either in the way of fees, or studies, or clinics, so great as to interfere with that freedom of professional movement or choice which should be the privilege of everyman in a free country?

It will be your duty to answer this question. And, if I am not very much mistaken, your answer will be that the supply is quite equal to the demand, and that the standards required by the medical profession, while not preventing any person from entering the profession who has talent, energy, and a moderate amount of capital, furnish a guarantee—a very proper guarantee—to the public that the licentiate of the council is a *bona fide* physician, equally learned with his fellows, of similar standing in any part of this continent, or any other continent where medicine is included among the learned professions.

But these elementary questions may not exhaust the legislative catechism in which you are likely to be drilled. For instance, you may be asked to consider whether you should be allowed to continue to exercise the right you now possess of disciplining the profession. Have you exercised that right prudently? Have you ever expelled a member because he wore a high hat, or dressed too dudishly, or drove too fine a turnout? Have you so terrorized and tyrannized the members of the profession generally that, rather than endure such bondage, the best of them have resigned their license, and taken to law or politics, or aldermanic honors, or some other more lucrative calling than medicine? Have your rules for professional etiquette and honor lost to the country any doctor whose great talents thus summarily extinguished could fairly be called a public loss? If not, you must be prepared with evidence, for it is quite possible the charge will be made.

You see from these brief observations how much of the time of the Legislature of Ontario may be taken up with the considerations of professional matters in which you are, no doubt, deeply interested. I cannot speak for this legislature, I have not seen it yet, but I will be greatly surprised if it will lend itself to any legislation which will lower the educational standards of the medical or any other profession, or will give for one moment color to the idea that the Province of Ontario is tired of professional excellence, skill, knowledge, and experience, and longing for an era of quackery, patent medicines, and manufactured advertisements. The medical profession deserves well of the people of Ontario. It has been most unselfish in its efforts to promote the public health and improve the sanitary conditions of the country. It has been at all times ready to accept every discovery in medical science which is calculated to prolong

life, or relieve suffering humanity. By years of effort and at great cost to the profession itself (for the public treasury has not been available for its purposes), it has placed medical education on a broad foundation, and has enlisted in its service many of the ablest men which the country has produced. It has been generous without jealousy towards every other profession. It has given good value for every privilege which has been of real service to the profession itself or to the country. Should it appear that it has privileges which are of no substantial use, or which may be used to cast discredit upon the profession, let them go ; but as to the great and fundamental characteristics of the legislation, which is of far greater advantage to the public than it is to the profession, the greatest consideration should be given to any proposal for a change. So long as frail humanity is heir to so many ills, medical men will be in demand. Let us have the best that skill and training can supply, and let us have the honor of training them ourselves in our own colleges and universities, and in such away as to suit the genius of our own people.

Correspondence.

To the Editor of THE CANADIAN PRACTITIONER :

DEAR SIR,—I have learned that the *Index Medicus* will cease to be published with the February number, owing to lack of support, and the fact that a large number of its subscribers are delinquent, unless an effort is made to continue it.

The value of this publication to those who do any work at all in connection with medical literature is so great that I take the liberty of writing to you to express the hope that you will not only become a subscriber, but will urge other of your professional friends to do so.

It is particularly necessary that the *Index Medicus* should be continued, owing to the fact that after the completion of the supplementary volume of the Index Catalogue of the Surgeon-General's Library there will be no record of contemporary medical literature, and he who desires to keep pace with it, or who wishes to study a particular subject, will have to resort to the laborious task of seeking in various journals that which he desires if the publication of the *Index Medicus* ceases.

It will be possible to continue the *Index Medicus* if 500 new subscribers are obtained. The subscription price is \$10 per annum, which should be sent to Mr. George S. Davis, publisher of the *Index Medicus*, Box 470, Detroit, Michigan.

As the *Index Medicus* can never be made a success from a commercial point of view, because of the peculiar scope of its work, I have no hesitancy in making you acquainted with these facts, and I earnestly hope that you will insert a notice emphasizing the importance of this matter in the columns of your valuable journal.

H. A. HARE.

Book Reviews.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA. Forty-fourth annual meeting, held at Philadelphia, May, 1894. Philadelphia: The Edwards & Docker Co., Printers.

The annual meeting of this society was held in Philadelphia, May 15th, 16th, 17th, under the presidency of Dr. H. G. McCormick, of Lycoming county. This society has published its transactions for about twenty-five years. This volume contains the minutes of the proceedings; the address of the president; special addresses in surgery, medicine, obstetrics, mental disorders, hygiene, and ophthalmology; and about forty papers on various subjects coming within the range of medicine, surgery, and obstetrics. The addresses and papers are, as a rule, practical in character, and excellent in quality. Unfortunately, the discussions are omitted, but otherwise there is no room for adverse criticism. Evidently the society is in a prosperous condition, and a perusal of this valuable volume of transactions will convince any reader that it contains many members who are possessed of marked ability. Dr. John B. Roberts, of Philadelphia, is the president-elect, and Dr. William B. Atkinson, also of Philadelphia, the secretary for the coming year.

MODERN HOMŒOPATHY: ITS ABSURDITIES AND INCONSISTENCIES. By William W. Browning, A.B., LL.B., M.D., Brooklyn, N.Y., Lecturer upon and Demonstrator of Anatomy, Long Island College Hospital, etc. Philadelphia: Press of William F. Fell & Co., 1220 Sansom street.

The following is the publishers' notice: "This essay was awarded the prize of \$100 offered by Geo. M. Gould, of Philadelphia, and is designed for distribution by physicians in order to disseminate more enlightened views upon the subject of which it treats. Copies of the pamphlet may be ordered of Dr. Geo. M. Gould, 119 South Seventeenth street, Philadelphia, at the rate of fifty cents a dozen, delivered. The unexpected popularity of the large first edition has warranted the printing of this still larger second edition, and has made possible a reduction in the price."

This is a very able and very readable pamphlet containing thirty-two pages of reading matter, well printed, and presented in a neat form. Notwithstanding all that we hear about homœopathy, few general practitioners, and, probably, few homœopaths themselves, have any intelligent conception of the doctrines of Hahnemann. We desire all who want to learn something about these doctrines to procure this interesting essay.

THE MEDICAL NEWS VISITING LIST FOR 1895. Weekly (dated, for 30 patients); monthly (undated, for 120 patients per month); perpetual (undated, for 20 patients weekly per year); and perpetual (undated, for 60 patients weekly per year). The first three styles contain 32 pages of data and 160 pages of blanks. The 60-patient perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book with pocket, pencil, and rubber. Seal grain leather, \$1.25. Philadelphia: Lea Brothers & Co., 1894.

The Visiting List for 1895 has been thoroughly revised and brought up to date. The text portion (32 pages) contains useful data for the physician and surgeon, including an alphabetical table of diseases, with the most approved remedies, and a table of doses. It also contains sections on examination of the urine, artificial respiration, incompatibles, poisons and antidotes, diagnostic table of eruptive fevers, and the ligation of arteries. The classified blanks (160 pages) are arranged to hold records of all kinds of professional work with memoranda and accounts. When desired, a ready-reference thumb-letter index is furnished, which is peculiar to this Visiting List, and which will save many-fold its small cost (25 cents) in the economy of time effected during a year. In its several styles "The Medical News Visiting List" adapts itself to any system of keeping professional accounts. In short, every need of the physician seems to have been anticipated in this invaluable pocket companion.

A SYSTEM OF LEGAL MEDICINE. By Allan McLane Hamilton, M.D., Consulting Physician to the Insane Asylums of New York City, etc., etc., and Lawrence Godkin, Esq., of the New York Bar, with the collaboration of Prof. James F. Babcock, Lewis Balch, M.D., Judge S. E. Baldwin, Louis S. Binsse, Esq., C. F. Bishop, Esq., A. T. Bristow, M.D., B. F. Cardozo, Esq., C. G. Chaddock, M.D., A. F. Currier, M.D., C. L. Dana, M.D., George Ryerson Fowler, M.D., W. T. Gibb, M.D., W. S. Haines, M.D., F. A. Harris, M.D., W. E. Hornblower, Esq., Chas. Jewett, M.D., P. C. Knapp, M.D., R. C. McMurtrie, Esq., C. K. Mills, M.D., J. E. Parsons, Esq., C. E. Pellew, E.M., Judge C. E. Pratt, W. A. Purrington, Esq., B. Sachs, M.D., F. R. Sturgis, M.D., Brandreth Symonds, M.D., V. C. Vaughan, M.D. Illustrated. Complete in two volumes. Volume II. New York: E. B. Treat, 5 Cooper Union, 1895.

We have already spoken in high terms of commendation respecting the first volume of this exceedingly interesting and valuable work. The list of collaborators, which we now give in full, contains the names of highly distinguished men, who are well known in the United States and some parts of Canada. The second volume contains seventeen chapters, including the following: "Duties and Responsibilities of Medical Experts"; "Insanity in its Medico-Legal Bearings"; "Mental Responsibility of the Insane in Civil Cases"; "Insanity and Crime"; "Aphasia and other Affections of Speech"; "The Traumatic Neuroses"; "The Effect of Electric Currents of High Power on the Human Body"; "Accident Cases"; "Birth, Sex, Pregnancy, and Delivery"; "Abortion and Infanticide"; "Marriage and Divorce"; "Surgical Malpractice," etc.; also "Appendix" and "Index." The volume is quite equal to the first. We can give it no higher praise.

Those who were present at the Toronto University medical banquet will remember the words of Dr. Graham and Judge Rose with reference to the importance of physicians being well fortified with a knowledge of their subject before going into the witness-box to give "expert" evidence. This fact was probably never better appreciated by our profession than it is to-day. This "System of Legal Medicine," which is thoroughly comprehensive, truly admirable in character, and fully up to the times, will be found simply invaluable to all physicians who desire to acquit themselves creditably when they "get into the hands of the lawyers," or when they are called upon in any way to express an opinion on a medico-legal subject.

The following books and pamphlets have been received :

CAUTERIZATION OF THE NARES, AND ACCIDENTS THAT MAY FOLLOW. By E. Fletcher Ingals, A.M., M.D., Chicago.

THE CYSTOSCOPE. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in Johns Hopkins University, Baltimore, Md. Reprinted from *The American Journal of Obstetrics*.

LOCAL ANÆSTHETICS AND COCAINE ANALGESIA : THEIR USES AND LIMITATIONS. By Thomas H. Manley, A.M., M.D., New York. 8vo., 185 pages. St. Louis : J. H. Chambers & Co., publishers, etc.

HÆMORRHAGIC INFARCTION OF THE FALLOPIAN TUBE. By W. W. Russell, M.D., Resident Gynæcologist in the Johns Hopkins Hospital, Baltimore, Md. Reprinted from *The American Journal of Obstetrics*.

CHOREA AND CHOREIFORM AFFECTIONS. By Wm. Osler, M.D., F.R.C.P., London ; Professor of Medicine, Johns Hopkins University, Baltimore, etc. Philadelphia : P. Blakiston, Son & Co., 1012 Walnut street.

ENLARGEMENT OF THE PROSTATE : ITS TREATMENT AND RADICAL CURE. By C. W. Mansell-Moulein, M.A., M.D. Oxon., F.R.C.S., etc. Demy 8vo. 176 pages. Price, \$1.50. London : H. K. Lewis, 136 Gower street, W.C.

THE EXAMINATION UNDER ANÆSTHESIA : ITS USES AND ITS LIMITATIONS. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in the Johns Hopkins University. Reprinted from the *New York Medical Journal*.

RESUSCITATION FROM IMPENDING DEATH DUE TO CONCEALED HÆMORRHAGE BY THE INFUSION OF A LITRE OF NORMAL SALT SOLUTION CENTRALLY INTO THE RADIAL ARTERY. By Howard A. Kelly, M.D., Professor of Gynæcology and Obstetrics in the Johns Hopkins University, Baltimore. Reprinted from *The American Journal of Obstetrics*.

HARE'S TEXT-BOOK OF PRACTICAL THERAPEUTICS. A text-book of practical therapeutics, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. de Schweinitz, Edward Martin, and Barton C. Hirst. New (4th) edition, thoroughly revised and much enlarged. In one octavo volume of 740 pages. Cloth, \$3.75 ; leather, \$4.75. Philadelphia : Lea Brothers & Co., 1894.

Medical Items.

THE staff of the *Dominion Medical Monthly* has lately undergone a radical change. Drs. W. H. B. Aikin, A. B. Atherton, J. H. Burns, John Ferguson, G. S. Ryerson, and A. A. Macdonald have severed their connection with that journal.

THE wife of Dr. T. H. Halsted (Tor., '81), Syracuse, New York State, died November 14.

DRS. R. A. STEVENSON, W. P. Caven, and James F. W. Ross, of Toronto, returned from England last month.

DR. MCKECHNIE, the partner of Dr. Hall, in Victoria, recently returned from Philadelphia, where he spent a few months in studying abdominal surgery with Dr. Joseph Price.

DR. ERNEST HALL, of Victoria, B.C., passed through Toronto a few days ago on his way to Europe. He expects to spend a few months in Berlin, Vienna, and London, "walking" the hospitals.

DR. VERNON ST. CLAIR HALLIDAY, a promising young physician, died from diphtheria at the Willard Parker Hospital, New York city, November 26th, at the age of 25 years. He graduated at McGill University, Montreal, in 1892. He was the eldest son of Dr. James T. Halliday, of Peterboro.

DR. WILLIAM HOPE, of Belleville, died at his home, November 28th, at the age of 80. He took the degree of M.D. from the University of New York in 1838, and became a licentiate of the old Medical Board in the same year. He was sheriff of the county of Hastings for many years before his death.

PHYSICIANS LIVING IN CHICAGO.—It is estimated that there are about 3,400 physicians within the corporate city limits of Chicago, embracing a territory of 186½ square miles, and a population in round numbers of 1,625,000 inhabitants.—*Journal of the American Medical Association*.

THE SCARCITY OF PATIENTS.—There may be some comfort to the many physicians who have felt the long-continued "dullness" in their practice in learning that it is not a local stagnation, but that the same conditions are being felt in other parts of the world. English medical journals speak of the "marvellous health of the country," and the large number of physicians who have attended the many congresses without being missed, so few are the

patients. An Edinburgh correspondent of the *Medical Press* writes recently "that in that city it was a vacant vacation with a vengeance; there was absolutely nothing stirring, and he knew of one practitioner acting as *locum tenens* for seven others on their holiday, who, notwithstanding this weight of responsibility, yet found ample time to play golf every day."—*N. Y. Medical Record*.

OCULAR BALLOTTEMENT.—The diagnosis of fluid vitreous with floating opacities may be aided by a little method that is not usually laid down in the text-books. The retinoscopic mirror is used in the same way as in indirect ophthalmoscopy. The patient has to be "trained" a little or carefully instructed in order to carry out the manipulation rightly, the essential point of which consists in halting a downward sweep of the eye suddenly and at such a point that the oculist can have a good view of the post-pupillary field. Direct the patient to look up to the ceiling and then to swiftly look at an object in front and on a line horizontal with the eyes, holding the gaze steadily there. If opacities floating in a fluid vitreous exist, this sudden "flip" of the vitreous chamber upward, followed by a sudden stoppage, flings the opacities upward, and with the ophthalmoscopic mirror they will be seen again to descend like snowflakes falling outside of a window in the night. This method of diagnosis might appropriately be named *ocular ballottement*.—*Medical News*.

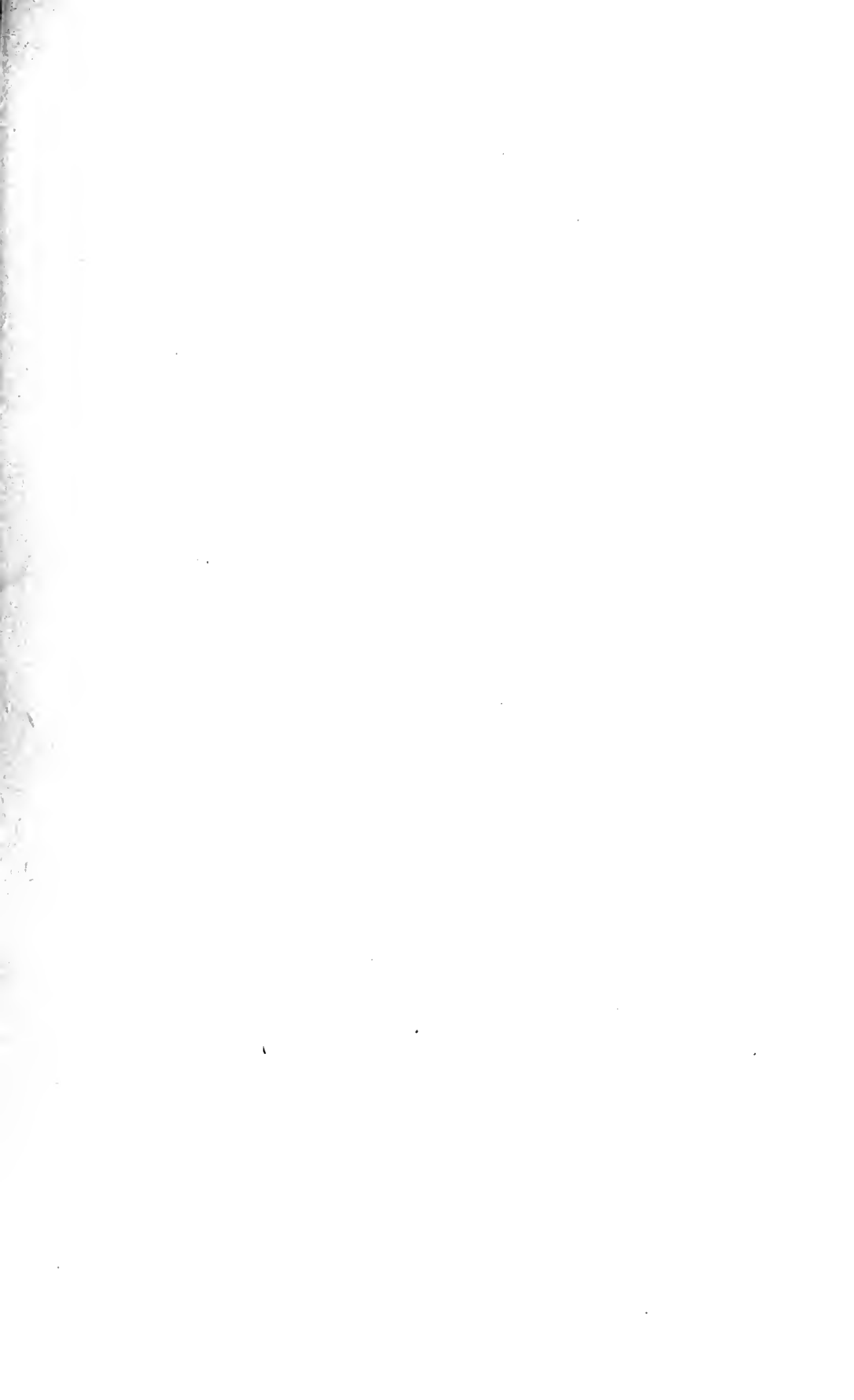
QUACK NURSES.—Quackery is contagious and widespread. There are quacks not only in medicine, but the infection seems also to have invaded the profession of nursing. From Detroit comes the announcement of the organization of a "Correspondence School of Health and Hygiene," which proposes to give "instruction by the correspondence method in the care of the sick." The course of instruction, it is believed, "if thoroughly studied by a reasonably intelligent person, will render the pupil as truly a trained nurse as the great majority of those who come from the training schools . . . No previous training or study is required other than the ability to read and comprehend." As to age, sixteen is not considered too young, nor fifty too old. It needs scarcely be said that the art of nursing is not to be acquired by correspondence, from reading, or even from didactic lectures; these measures may aid in the comprehension of the principles upon which intelligent and rational nursing is based, but actual experience by the bedside, in the hospital ward, and in the sick-room, is absolutely essential.—*Medical News*.

THE ABUSE OF DISPENSARIES AND HOSPITALS.—In an effort to correct the prevailing abuse of the privileges accorded by dispensaries and hospitals, the Medical Charities Committee of the British Medical Association has had printed notices for distribution among the institutions of London, with the request of display in a conspicuous place, stating that, as these institutions have been "established to relieve only those persons who are too poor to pay for suitable medical and surgical aid, . . . patients will be required to give information as to their means and circumstances, with a few to prevent the abuse of this charity by persons who are well able to pay." A canvass of the

various institutions reveals the fact that the majority are in favor of the adoption of some such regulation as that proposed, many having already similar measures in operation; others have the matter under consideration, while none has absolutely rejected the propositions made. The example is one that American institutions could follow with advantage and dignity.—*Medical News*.

POISONING FROM A SPIDER BITE.—Dr. Richard H. Lewis, of Kinston, relates the following case in which he himself was the patient: It is, perhaps, he says, not universally known that there is in North Carolina a species of spider whose bite is very nearly akin in its effects to that of the tarantula of the tropics. On Sunday night, June 10th, he was bitten upon the glans penis by one of these spiders. The first sensation was precisely like that which is produced by the nettle. Very soon pains began in the scrotum, and in half an hour they extended across the abdomen. They seemed to travel in a band as wide as the hand, rigidly contracting the muscles as they went upward. In an hour this band was drawn tightly around the chest, and the pain was terrible. It seemed as if the ribs and the intercostal muscles had become consolidated like an iron breast-plate, and lightning-like pains darted around the bands continually. The author's pulse fell to about fifty, his breath came in short gasps, and every inspiration seemed as if it were to be the last one. He became delirious, and when the pain reached the brain he was in a state of excited horror. In no other words, he says, can it be explained. Hypodermic injections of morphine were given four times during the night. On the following morning he was quieter, the pain had spread to the legs and to the tips of the toes. During the day he seemed to be some one else, and was not free an instant from distressing pain. Another injection of morphine was given, but the patient was exceedingly restless all that day and during the night. On Tuesday morning the pain left the upper part of the body and settled in the legs and feet. Its character had changed to a sharp, pricking sensation, coming every minute in lancinating stabs, and toward evening the feeling of constriction in the chest passed off. On Wednesday the pain broke up into spots instead of being in bands as before, and acute stinging pains in all parts of the body, except the head, were constant. From the second joint of the left forefinger to the ball of the right great toe the pain transferred itself with lightning speed. During that day it again left the upper part of the body, confining itself to the legs and feet, and morphine was again given. On Thursday, the pain continued, but assumed the character of "nervous rheumatism," and its favorite seat was the loins. The author now determined to try bodily exercise and went into his garden, where he became interested in his work and thoroughly warmed. Profuse perspiration was induced and the pains stopped, but, feeling very weak, he was compelled to rest, when they again set in, piercing and stabbing as before. For about a week the author had no appetite and ate nothing; afterward, however, he ate regularly, but a very small quantity of food sufficed. After that the pains gradually ceased, lingering longest in the toes, and by the 18th of June had disappeared, with the exception of occasional stabs in the toes. A few days of sea-bathing completely restored the author to his usual health.—*North Carolina Medical Journal*.

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